

## CHAPTER 4 – DESIGN CRITERIA

### STANDARDS OVERVIEW

While desired conditions and objectives define where we are headed with management of the George Washington National Forest, standards define the “boundaries” we are to follow in designing projects. Standards place limitations on management activities or resource uses, generally for environmental protection, public safety, or resolution of an issue. In essence, standards put a condition on the application of a suitable use.

Forestwide standards apply to the entire Forest unless superseded by specific management prescription area direction. When a management prescription is silent regarding a specific resource activity, the forest-wide direction applies. These standards are generally listed with the primary management activity or geographic area under consideration. For example, a standard related to riparian areas while conducting a timber sale would be listed under Vegetation Management. A standard related to Mount Pleasant National Scenic Area would be listed under Mount Pleasant National Scenic Area. However, care should be taken to be aware of the applicability of all standards during project design and implementation.

The standards in this section are very similar to those in the Jefferson Forest Plan. One of the goals of this Plan is to develop more consistency between the two Forest Plans, at least such that FW-1 would be the same for both Forest Plans. Standards with an \* indicate that the standard in this Plan has been modified from that in the Jefferson Forest Plan. Standards with “a, b, etc” following the standard number indicate a standard not found in the Jefferson Forest Plan. Standards with a number, but no text indicate a standard from the Jefferson Forest Plan that does not apply to the GWNF. Using the first section below as an example, standard FW-1 is the same for both Forests; standard FW-8\* is similar to FW-8 in the Jefferson Plan but is modified; and standard FW-9 only applies to the Jefferson Plan.

In addition to the standards found in this Revised Plan, the Forest is required to comply with applicable laws, executive orders, and regulations, manuals, and handbooks.

### FORESTWIDE STANDARDS

#### Watershed Resources

##### *Water and Soil Quality*

- FW-1\*:** Resource management activities that may affect soil and/or water quality meet or are more stringent than Virginia and West Virginia Best Management Practices, State Erosion Control Handbooks, and standards in this Forest Plan.
- FW-2:** Locate all facilities (e.g. trails, trail shelters, restrooms, designated campsites, etc.) in a manner that minimizes the possibility of contamination of water sources. Educate users on “leave no trace” camping practices, including sanitation practices that minimize the potential for contamination of water sources.
- FW-3:** Prior to authorizing or re-authorizing new or existing diversions of water from streams or lakes, determine the instream flow or lake level needs sufficient to protect stream processes, aquatic and riparian habitats and communities, and recreation and aesthetic values.
- FW-4:** Water is not diverted from streams (perennial or intermittent) or lakes when an instream flow needs or water level assessment indicates the diversion would adversely affect protection of stream processes, aquatic and riparian habitats and communities, or recreation and aesthetic values.

- FW-5:** On all soils dedicated to growing vegetation, the organic layers, topsoil and root mat will be left in place over at least 85% of the activity area and revegetation is accomplished within 5 years. (The activity area is the area of potential soil disturbance expected to produce vegetation in the future, for example: timber harvest units, prescribed burn area, grazing allotment, etc.)
- FW-6:** Locate and design management activities to avoid, minimize, or mitigate potential erosion.
- FW-7:** Use ditchlines and culverts when new permanent road construction grades are more than 6% and the road will be managed as open for public use.
- FW-8\*:** Water saturated soils in areas expected to produce biomass should not receive vehicle traffic or livestock trampling to prevent excessive soil compaction.
- FW-9:**
- FW-10\*:** Where soils are disturbed by management activities, appropriate revegetation measures should be implemented. When outside the local seeding seasons, initial treatments may be of a temporary nature, until permanent seeding can be applied. Revegetation should be accomplished within 5 years. For erosion control, annual plants should make up >50% of seed mix when seeding outside the primary seeding season and the area should be reseeded with perennials within 1½ years.

### ***Air Quality***

Standards for air quality related to wildland fire and prescribed fire are found in the Fire Management section of this chapter.

- FW-11:** Conduct all National Forest management activities (including permitted activities) in a manner that does not result in a significant contribution to: (1) a violation of National Ambient Air Quality Standards; or (2) a violation of applicable provisions in the State Implementation Plan.

### ***Riparian Areas and Corridors***

Riparian areas and corridors are managed according to Management Prescription Area 11. See Appendix A for the definitions of riparian areas and corridors.

### ***Channeled Ephemeral Zones***

The following standards apply to 25 feet on each side of a channeled ephemeral stream and 25 feet upstream for the point at which the scoured channel begins (the “nick point”).

- FW-12:** Motorized vehicles are restricted in the channeled ephemeral zone to designated crossings. Motorized vehicles may only be allowed on a case-by-case basis, after site-specific analysis, in the channeled ephemeral zone outside of designated crossings.
- FW-13:** Management activities expose no more than 10% mineral soil in the channeled ephemeral zone.
- FW-14:** Up to 50% of the basal area may be removed down to a minimum basal area of 50 square feet per acre. Removal of additional basal area is allowed on a case-by-case basis when needed to benefit riparian-dependent resources.
- FW-15:** Permitted firewood cutting within the channeled ephemeral zone must take into consideration large woody debris needs. Ranger Districts will identify areas where firewood cutting is not permitted due to large woody debris concerns.
- FW-16:** At least partial suspension is required when yarding logs over channeled ephemerals.
- FW-17:** Large woody debris may be removed if it would otherwise pose a risk to water quality, degrades habitat for aquatic or riparian wildlife species, impedes water recreation (e.g. rafting), or when it poses a threat to private property or Forest Service infrastructure (e.g. bridges). The need for removal is determined on a case-by-case basis.

- FW-18:** The addition of large woody debris in channeled ephemeral reaches will primarily be through passive recruitment rather than active placement.
- FW-19:** New human-constructed impoundments are allowed on a case-by-case basis, following evaluation of downstream instream flow needs.
- FW-20:** When crossing channeled ephemeral streams, culverts, temporary bridges, hardened fords, or corduroy are used where needed to protect channel or bank stability.
- FW-21:** Construction of crossings is completed on all channeled ephemerals as soon as possible after work has started on the crossing. Permanent and temporary roads on either side of crossings within the channeled ephemeral zone are graveled.
- FW-22:** If culverts are removed, banks and channel must be restored to a natural size and shape. All disturbed soil must be stabilized.
- FW-23:** Trails, campsites, and other recreational developments are located, constructed, and maintained to minimize impacts to channel banks and to prevent other resource damage. When existing facilities are causing unacceptable resource damage, appropriate mitigation measures will be implemented. Soils are stabilized on eroding trails and recreational sites.
- FW-24:** New non-motorized trail construction is allowed to improve existing trail configuration and improve access.
- FW-25:** New motorized trails are prohibited within the channeled ephemeral zone except at designated crossings or where the trail location requires some encroachment; for example, to accommodate steep terrain.
- FW-26:** Motorized and non-motorized trail reconstruction and relocation within the channeled ephemeral zone are allowed to reduce impacts to riparian and aquatic resources.
- FW-27:** Where grazing is currently allowed and under a permit, control and mitigate to restore, enhance, or maintain the integrity of channels and banks. Grazing permit reauthorization is allowed, provided progress towards mitigation of negative impacts on the channeled ephemeral zones has occurred. New grazing permits will be designed to prevent negative impacts to the channeled ephemeral zone. Livestock will be excluded from channeled ephemeral zones whenever the zone cannot be maintained or restored otherwise.
- FW-28:** Feeding troughs and salt and mineral blocks are not allowed inside the channeled ephemeral zone. Watering troughs are appropriately located to protect the streams.
- FW-29:** During prescribed fire operations in the channeled ephemeral zone, use the least ground disturbing method of fireline construction, favoring blacklines and handtools.
- FW-30:** Do not disk, blade, or plow fireline within the ephemeral stream channels, use them as natural firebreaks. (This applies to the actual stream channel, not the entire 25 foot zone.)
- FW-31:** Revegetate and waterbar firelines as quickly as possible, where necessary to prevent erosion. Use water diversions to keep sediment out of channels.

### ***Aquatic Species***

See Management Prescription Area 11 (Riparian Areas) for aquatic species management direction.

### **Ecological and Species Diversity**

- FW-32:** Retain soft mast producing species (dogwood, black gum, hawthorne, grapes, serviceberry, etc.) during vegetation management treatments when consistent with overall regeneration and species composition objectives.

**FW-33\*:** Favor the retention of large (>20" d.b.h.) standing snags and den trees when implementing silvicultural treatments. Active bear den trees are retained in harvest areas along with an unharvested buffer of at least 100 feet wide on all sides of the den.

### ***Threatened, Endangered and Sensitive Species Management***

**FW-34:** Maintain records of locations and conditions of federally listed threatened and endangered species, and of Regional Forester's sensitive species within the planning area.

**FW-35:** Control non-native invasive species where they are causing negative effects to threatened, endangered, or sensitive species. Do not intentionally introduce non-native species that are known or suspected of causing negative effects to federally listed threatened and endangered species in or near sites supporting these species.

**FW-36:** Do not issue permits for collection of threatened, endangered, sensitive, and locally rare species, except for approved scientific purposes.

### ***Bald Eagle Management***

**FW-37\*:** Follow National Bald Eagle Management Guidelines. Avoid timber harvesting operations within 660 feet of active nest during breeding season. Prescribed burning and other management activities designed to conserve or enhance habitat should be undertaken outside of breeding season around active nest tree. During prescribed burning or wildland fire operations, avoid operating helicopters or other fixed-wing aircraft within 1,000 feet of an active nest during the breeding season.

### ***Peregrine Falcon Management***

**FW-38:** Post and enforce seasonal closure orders near active peregrine falcon nests during season of use to control human disturbance.

### ***Northern Flying Squirrel Management***

**FW-39\*:** Follow USFWS Post-delisting Monitoring Plan for the West Virginia Northern flying Squirrel.

**FW-40:**

### ***Management of Federally-listed Plants***

**FW-41\*:** Known occurrences of northeastern bulrush, Virginia sneezeweed, swamp pink, shale barren rock cress, and smooth cone flower are allocated to Management Prescription Area 4D-Special Biological Areas to ensure protection and maintenance of their current populations and surrounding habitat conditions.

**FW-42:**

### ***Cow Knob Salamander Management***

**FW-43:**

**FW-43a:** If Cow Knob salamanders are found in areas outside the Shenandoah Mountain Crest management prescription area, those areas will be subject to the same management measures as described in the Shenandoah Mountain Crest Management Prescription Area 8E7.

### ***Virginia Big-Eared Bat Management***

**FW-44:** See standards related to caves.

### **Indiana Bat Management**

- FW-45:** Each Indiana bat hibernaculum has a primary and secondary cave protection area managed according to Management Prescription Area 8E4. If additional hibernacula are found, the desired condition and standards of Management Prescription Area 8E4 apply until an environmental analysis to consider amendment to the Forest Plan is completed.
- FW-46:** In order to promote potential summer roost trees and maternity sites for the Indiana bat throughout the Forest, planned silvicultural practices in hardwood-dominated forest types will leave all shagbark hickory trees greater than 6 inches d.b.h.<sup>3</sup>, except when they pose a safety hazard. In addition:
- Clearcut openings 10 to 25 acres in size will also retain a minimum average of 6 snags or cavity trees per acre, 9 inches d.b.h. or larger, scattered or clumped.
  - Group selection openings and clearcuts less than 10 acres in size have no provision for retention of a minimum number of snags, cavity trees, or residual basal area due the small opening size and safety concerns.
  - All other harvesting methods (and clearcut openings 26-40 acres in size) will retain a minimum residual 15 square feet of basal area per acre (including 6 snags or cavity trees) scattered or clumped. Residual trees are greater than 6 inches d.b.h. with priority given to the largest available trees, which exhibit characteristics favored as roost trees by Indiana bats.
- FW-47:** To insure a continuous supply of roost trees and foraging habitat, the following forest-wide conditions must be maintained:
- Minimum of 60% of the combined acreage of all FSVEG<sup>4</sup> Forest Types on the Forest will be maintained over 70 years of age; AND
  - Minimum of 40% of the combined acreage of all FSVEG Forest Types 53 (white oak, red oak, hickory) and 56 (yellow poplar, white oak, red oak) will be maintained at an age greater than 80 years old.
- FW-48:** When active roost trees are identified on the Forest, they will be protected with a ¼ mile buffer surrounding them. This protective buffer remains until such time the trees and associated area no longer serve as a roost (e.g. loss of exfoliating bark or cavities, blown down, or decay).
- FW-49:** No disturbance that will result in the potential taking<sup>5</sup> of an Indiana bat will occur within this active roost tree buffer.
- Commercial timber harvesting, road construction, and use of the insecticide diflubenzuron (Dimilin) are prohibited.
  - Prescribed burning, timber cutting, road maintenance, and integrated pest management using biological or species-specific controls during non-roosting season are allowed, following project level analysis to determine the direct, indirect, and cumulative effects on Indiana bats and the hibernacula.
  - Other activities within this buffer are allowed following determination that they will not result in a potential taking of an Indiana bat.
- FW-50:** Removal of known Indiana bat active roost trees will be avoided, except as specified in the next 2 standards.
- FW-51:** If during project implementation, active roost trees are identified, all project activity will cease within a ¼ mile buffer around the roost tree until consultation with U.S. Fish and Wildlife Service is completed to determine whether project activities can resume.
- FW-52:** In the event that it becomes absolutely necessary to remove a known Indiana bat active roost tree, such a removal will be conducted during the time period when the bats are likely to be in

hibernation (November 15 through March 31), through informal consultation with the U.S. Fish and Wildlife Service. Trees identified as immediate threats to public safety may be removed when bats are not hibernating; however, informal consultation with U.S. Fish and Wildlife Service is still required. Examples of immediate threats to public safety include trees leaning over a trail, public road or powerline that could fall at any time due to decay or damage.

- FW-53:** Prescribed burning is allowed to maintain flight and foraging corridors in upland and riparian areas potentially used by bats in the summer. To avoid injury to non-flying young Indiana bats, prescribed burning within 2 miles of known active maternity roosting sites between June 1 and August 1 is prohibited.
- FW-54:** Opportunities should be sought to include creation of drinking water sources for bats in project plans, where appropriate, in areas where no reliable sources of drinking water are available. Opportunities will be considered when the creation is not detrimental to other wetland-dependent species (i.e., damage to natural springs and seeps).
- FW-55:** If active maternity roost sites are identified on the Forest, they will be protected with a 2-mile buffer defined by the maternity roost, alternate roost sites, and adjacent foraging areas.
- FW-56:** No disturbance that will result in the potential taking of an Indiana bat will occur within this active maternity roost site buffer.
- Commercial timber harvesting, road construction, and use of all insecticides (are prohibited).
  - All other activities within this buffer will be evaluated during project level analysis to determine the direct, indirect, and cumulative effects on Indiana bats, through informal consultation with the U.S. Fish and Wildlife Service.
- FW-57:** If during project implementation, active maternity roost sites are identified, all project activity will cease within a 2-mile buffer around the maternity roost until consultation with U.S. Fish and Wildlife Service is completed to determine whether project activities can resume.
- FW-58:** Monitoring of timber sales and other activities will be implemented as follows:
- Timber sale administrators or biologists will conduct and report normal inspections of all timber sales to ensure that measures to protect the Indiana bat have been implemented. Timber sale administrators will conduct normal inspections of all timber sales to administer provisions for protecting residual trees not designated for cutting under provisions of the timber sale contract. Unnecessary damage to residual trees will be documented in sale inspection reports and proper contractual or legal remedies will be taken. The Forest will include this information in their annual monitoring reports and make available to the U.S. Fish and Wildlife Service, if requested.
  - Informal consultations among the U.S. Fish and Wildlife Service and the Forest will occur as needed in order to review and determine any need to modify provisions of the biological opinion, and other issues regarding the Indiana bat.
- FW-59:** Where appropriate, training should be conducted for employees regarding bats in the National Forests. Training should include sections on bat identification, biology, habitat requirements, and sampling techniques.
- FW-60:** Develop informational and educational displays about bats to inform the public about this misunderstood group of mammals.

### ***Rare Natural Communities***

- FW-61:** In cooperation with the States' Natural Heritage agencies, make appropriate adjustments to Management Prescription Area 4D-Special Biological Areas through the Forest Plan amendment process as new rare community location and management information becomes available.

**FW-62:** Maintain records of rare community locations and conditions across the forest. Project areas are surveyed for rare communities prior to implementing projects that have the potential to negatively affect them.

### **Species Diversity**

**FW-62a:** When land disturbing projects are proposed in cliff, talus and large rock outcrop areas: a) identified species associated with the Cliff, Talus and Rock Outcrop Species Group will be searched for; and b) effects of the proposed project on these species will be evaluated.

**FW-62b:** When land disturbing projects are proposed in areas where members of the Lepidopteran Species Group occur: a) the area where the species occurs and adjacent habitat will not be treated with Dimilin, BT or other insecticides that kill lepidopterans other than gypsy moth; and b) the entire area where the species occurs will not be part of a single prescribed burn; burning will be done only in patches of the occupied habitat.

**FW-62c:** When land disturbing projects are proposed in areas where members of the Species Needing Occurrence Protection Species Group are likely to occur (known county, proximity to known populations, suitable habitat): a) identified species associated with this species group will be searched for; and b) effects of the proposed project on the species will be evaluated.

**FW-62d:** Manage the old home sites, roadsides, and old fields where members of the Ruderal Species Group are found in conditions that maintain their open character.

**FW-62e:** Limit collection of species identified in the Species Sensitive to Over Collection Species Group to approved scientific purpose, specifically: a) limit permission to collect these species; b) limit sharing of location information of these species; c) avoid improving access to these locations; d) evaluate seasonal closure of access to these locations; and e) evaluate relocation of access to these locations.

**FW-62f:** For species in the Species Sensitive to Recreational Traffic Species Group: a) provide education regarding the recreational impacts to these species; b) alert recreation users of the concerns in the area; c) avoid improving access to these locations; d) evaluate seasonal closure of access to these locations; and e) evaluate relocation of access to these locations.

### **Caves**

**FW-63\*:** A minimum of 200 foot buffers are maintained around cave entrances, sinkholes, and cave collapse areas known to open into a cave's drainage system. There are no soil-disturbing activities or harvest of trees within this buffer. Wider buffers are identified through site-specific analysis when necessary to protect caves from potential subterranean and surface impacts.

**FW-64:** The use of caves for disposal sites or the alteration of cave entrances is prohibited except for the construction of cave gates or similar structures to ensure closure.

**FW-65:** Management activities within any area draining into a cave are limited if they may affect the cave ecosystem through sedimentation, soil sterilization, the addition of nutrients or other chemicals (including pesticides and fertilizers), or if they change the cave's natural hydrology or micro-climate.

**FW-66:** Post and enforce seasonal closure orders around entrances of caves and abandoned mines occupied by significant populations of bats, to reduce the frequency and degree of human intrusion. Prohibit camping and campfires at the entrance to caves, mines, and rock shelters used by bats.

**FW-67:** If such closure orders are found to be ineffective, construct and maintain gates or other structures that allow for entrance and egress by bats. If necessary to further discourage human disturbance to caves occupied by significant populations of bats, close non-essential public access routes controlled by the Forest Service within ¼ mile of cave entrances during periods of use by bats.

- FW-68:** Human access to caves for educational and recreation use may be allowed during periods when bats are not present. If damage to a cave occurs as a result of such use, close the cave. Allow human access (i.e. scientific study) on a case-by-case basis when bats are present.
- FW-69:** The specific location of a Significant Cave (as defined in the Cave Resources Protection Act) cannot be made available to the public unless it is determined that disclosure of this information would not create a substantial risk of harm, theft, or destruction of the cave. Significant and potentially significant caves on the Forest are managed in accordance with the Cave Resources Protection Act of 1988 (16 U.S.C. 4301-4309) to protect them through regulating their use, requiring permits for removal of their resources, and prohibiting destructive acts.

## **Vegetation, Old Growth and Forest Health**

### **Vegetation**

- FW-70:** Structural diversity may be increased through pre-commercial thinning, commercial thinning, uneven-aged management, creating canopy gaps and openings 0.25 to 2 acres in size using non-commercial cut and leave treatments, or a combination of these treatments when compatible with the desired condition and standards of the appropriate management prescription. Due to practical considerations, these treatments typically occur on slopes less than 30%, although there is no restriction on steeper slopes if feasible. Even-aged stand regeneration treatments, where desired, may occur later in the life of these stands.
- FW-71:** When regenerating forest stands, regenerate to native tree species that commonly occur naturally on similar sites within that land type association.
- FW-72:** To the extent practical, control threats from insects and disease in the Spruce Forest Ecological System.
- FW-73\*:** Design all silvicultural treatments in the Spruce Forest Ecological System to maintain or restore the forest type.
- FW-74:** During silvicultural treatments in all forest types, patches of live Eastern hemlock greater than ¼ acre are retained.
- FW-75:** In order to maintain future restoration opportunities, do not cut live Carolina hemlock. Exceptions may be made to provide for public safety, protection of private resources, insect and disease control, or research.
- FW-76:** During silvicultural treatments, retain all live butternut with more than 50% live branches. Record the approximate location of these trees and notify the Forest Silviculturist.

### **Old Growth**

- FW-77\*:** Inventory stands for existing old growth conditions during project planning using the criteria in Appendix B (*Guidance for Conserving and Restoring Old Growth Forest Communities on National Forests in the Southern Region* (Forestry Report R8-FR 62, June 1997)). Consider the contribution of identified patches to the distribution and abundance of the old growth community type and to the desired condition of the appropriate prescription during project analysis. For purposes of project planning, the following old growth forest types are considered well-represented in the current inventory of existing old growth for the George Washington National Forest: the Dry Mesic Oak Type (FSVEG forest types 51, 53, 54, 55) and Dry & Dry-Mesic Oak-Pine (FSVEG forest types 42, 43, 44, 45, 46, 47, 48) Forests and may be managed using standard silvicultural practices.
- FW-78\*:** Following project analysis, inventoried old growth will be identified, mapped and subject to old growth management direction.

## Forest Health

### Gypsy Moth

- FW-79:** Integrated Pest Management is used to protect resources from damage caused by the gypsy moth.
- FW-80:**
- FW-81:** Suppression actions are allowed to reduce damage caused by outbreaks where gypsy moths are established as identified by the entomologists with the Forest Health Protection Unit of the Forest Service. Suppression treatments available for use in gypsy moth suppression include, but are not limited to, the bacterial insecticide *Bacillus thuringiensis* var. *kurstaki*, the chemical insect growth regulator diflubenzuron, and the gypsy moth specific biological insecticide
- FW-82:**
- FW-83\*:** The development, improvement, or testing of high population treatment tactics (insecticide application), low population treatment tactics (mating disruption, sterile insect release, fungal application, insecticide application, and mass trapping) and introduction of natural enemies may be considered in all forest areas except Wilderness and where indicated in specific management prescriptions.

### Southern Pine Beetle

- FW-84:** Integrated Pest Management is used to prevent or control damage caused by the southern pine beetle.
- FW-85:** Use hazard rating models and silvicultural treatments to reduce risk of southern pine beetle infestation in pine forests.

### Non-native Invasive Plant Species

- FW-86:** The use of Category 1 Species (Regional list of species that are known to be invasive and persistent throughout all of most of their range) is prohibited.
- FW-87:** The establishment or encouragement of Category 2 Species (Regional list of species that are suspected to be invasive or are known to be invasive in limited areas) is prohibited in areas where ecological conditions would favor invasiveness and is discouraged elsewhere. Projects that use Category 2 Species should document why no other (non-invasive) species will serve the purpose and need.
- FW-88:** Favor use of native grasses and wildflowers beneficial as wildlife foods when seeding temporary roads, skid roads, log landings and other temporary openings when slopes are less than 5%. On slopes greater than 5%, favor use of vegetation that best controls erosion.
- FW-88a:** Planning for management activities includes consideration of existing and potential non-native invasive plant (NNIP) threats. Site-specific plans should include control/eradication treatments and follow up monitoring of those treatments for effectiveness. Examples include inventory and treatment of log landing and haul road sites for timber sales, fire control lines (particularly those with soil disturbance), areas near existing seed sources for prescribed burns, and trail corridors for trail construction.
- FW-88b:** A contractor's sources of fill, soil, shale, and related materials will be pre-approved. Contractors will submit a description of the source. The project inspector or a qualified designee will inspect the supply source. Use of the source will be prohibited if contaminated by transferable agents of invasive species.

- FW-88c:** Forest sources of fill, borrow or road surfacing material will be examined for NNIP and treated as necessary to prevent transfer of invasive plants to other parts of the Forest.
- FW-88d:** Mechanical equipment, such as that used for logging, mowing, fire fighting and earth moving (including road graders), should be free of soil, seeds, and other attached material prior to coming on the Forest or being moved from areas on the Forest with NNIP infestations to areas free from noticeable infestations. Such equipment should be examined by qualified Forest Service personnel before being allowed on the Forest.
- FW-88e:** Personnel treating NNIP infestations will take appropriate measures to prevent transporting seeds or other propagules to other sites. Such measures may include cleaning equipment at the treatment site after treatment, bagging the equipment until such time that it can be cleaned (e.g. hand sprayers), removing and bagging outer garments after treatment, brushing clothing and boots thoroughly before departing the treatment site.
- FW-88f:** Fueling or oiling of mechanical equipment will occur away from aquatic habitat.
- FW-88g:** When work is conducted in areas containing TESLR plant species, those plants will be flagged, marked or identified for applicators to avoid spraying. A physical barrier will be used to protect non-target species when they occur immediately adjacent to the treatment area.

## **Pesticides**

- FW-89:** Application is supervised by a certified pesticide applicator. Workers who apply pesticides are trained to ensure minimum impacts and maximum effectiveness. Only those methods that assure proper application of pesticides are used.

## **Insecticides**

- FW-90\*:** Insecticides known to have negative impacts on aquatic ecosystems are not aerially applied within 200 feet of perennial streams, wetlands, or open bodies of water. The use of imidacloprid/insecticides for hemlock woolly adelgid, may be ground applied only if: 1) they pose a low risk of soil movement and groundwater contamination; 2) only where there is enough soil and organic matter to prevent the chemical from moving; 3) in the case of soil injection, no injections deeper than the O/A horizon occur; 4) they are used at the lowest effective rate; and 5) the soil is not saturated.
- FW-91:** A notice of intent to aerially apply insecticides or other aerially applied intervention tactics (e.g. pheromone flakes) is posted on signs prior to treatment. Signs are placed along roads and trails at major entry points to the treatment area. For wilderness areas, the notice of intent is placed outside the wilderness boundary at major trailheads. Wilderness areas have signs in place at least one week prior to treatment. Signs inform visitors of the type of intervention tactic and the time span in which application may occur, thus allowing visitors the option of minimizing or avoiding exposure to the treatment.
- FW-92:** Treatment of developed recreation areas such as picnic areas and campgrounds or dispersed areas of high concentrated use should be scheduled during low-use periods, or the areas are temporarily closed in order to minimize human exposure to the treatment. Signs are posted in these areas at least 24 hours before treatment begins. Signs provide information on scheduled treatment dates and type of treatment.
- FW-93:** Treatment of dispersed recreation areas accessible by trails have signs posted at all major points of entry. Signs are in place at least 24 hours before treatment begins. The signs provide information on date and type of treatment in order to allow visitors to minimize or avoid exposure.

## **Herbicides**

**FW-94:** Method and timing of application are chosen to achieve project objectives while minimizing effects on non-target vegetation and other environmental elements. Selective treatment is preferred over broadcast treatment. Application methods from most to least selective are:

- Cut surface treatments;
- Basal stem treatments;
- Directed foliar treatments;
- Soil spot (spot around) treatments;
- Soil spot (spot grid) treatments;
- Manual granular treatments;
- Manual/mechanical broadcast treatments;
- Helicopter treatments.

**FW-95:**

**FW-96:** Areas do not undergo prescribed burning for at least 30 days after herbicide treatment.

**FW-97:** Aerial application with herbicides is allowed only in utility corridors. Each aerial herbicide application must have an operations plan to ensure that:

- Adequate precautions are taken to protect the crew, including equipment certification and hazard identification;
- Areas to be aerially treated are clearly marked; and
- Methods used to avoid buffers and other sensitive areas are safe and effective.

**FW-98:** No herbicide is aerially applied within 200 horizontal feet of an open road or designated trail. Buffers are clearly marked before treatment so applicators can easily see and avoid them.

**FW-99:** No herbicide is aerially applied within 300 feet, nor ground-applied within 60 feet, of any known threatened, endangered, proposed, or sensitive plant, except where its use is necessary to control non-native invasive species affecting federally listed or sensitive species. Buffers are clearly marked before treatment so applicators can easily see and avoid them.

**FW-100:** No herbicide is aerially applied within 200 horizontal feet, nor ground-applied within 30 horizontal feet, of lakes, wetlands, perennial or intermittent springs and streams. No herbicide is applied within 100 horizontal feet of any public or domestic water source. Selective treatments (which require added site-specific analysis and use of aquatic-labeled pesticides) may occur within these buffers only to prevent significant environmental damage such as non-native invasive plant infestations. Buffers are clearly marked before treatment, so applicators can easily see and avoid them.

**FW-101:** With the exception of utility corridor and road rights-of-way, no herbicide is broadcast within 100 feet of private land or 300 feet of a private residence, unless agreed to by the landowner. Buffers are clearly marked so applicators can easily see and avoid them.

**FW-102\*:** When applying herbicide, protect non-target vegetation, especially threatened, endangered, proposed, or sensitive plants by employing a physical barrier between them and the area being treated. The physical barrier must be sufficient to protect the non-target vegetation from herbicide drift and flow

**FW-103:** Aquifers and public water sources are identified and protected.

- FW-104:** Application equipment, empty herbicide containers, clothes worn during treatment, and skin are not cleaned in open water or wells. Mixing and cleaning water must come from a public water supply and be transported in separate labeled containers.
- FW-105:** Herbicide mixing, loading, or cleaning areas in the field are not located within 200 feet of private land, riparian corridors, open water or wells, or other sensitive areas.
- FW-106\*:** Only stem-specific treatments should be done on rock outcrops or sinkholes. No soil-active herbicide with a half-life longer than 3 months should be broadcast on slopes over 45 percent or on aquifer recharge zones. Such areas should be clearly marked before treatment so applicators can easily see and avoid them.
- FW-107:** Weather is monitored and the project is suspended if temperature, humidity, or wind becomes unfavorable as shown below. NOTE: The following table is applicable to pesticides, not just herbicides.

**Table 4.1 Unacceptable Weather Conditions for Herbicide Application**

	Temps Higher Than	Humidity Less Than	Wind (at Target) Greater Than
Ground:			
Hand (cut surface)	N.A.	N.A.	N.A.
Hand (other)	98F	20%	15 mph
Mechanical (liquid)	95F	30%	10 mph
Mechanical (granular)	N.A.	N.A.	10 mph
Aerial: Granular	N.A.	N.A.	8 mph

- FW-108:** Nozzles that produce large droplets (mean droplet size of 50 microns or larger) or streams of herbicide are used. Nozzles that produce fine droplets are used only for hand treatment where distance from nozzle to target does not exceed 8 feet.
- FW-108a:** Herbicides should be applied at the lowest rate effective in meeting project purposes and according to guidelines for protecting human (NRC 1983) and wildlife health (EPA 1986a). Application rate and work time should not exceed levels that pose an unacceptable level of risk to human or wildlife health. If the rate or exposure time being evaluated causes the Margin of Safety or the Hazard Quotient computed for a proposed treatment to fail to achieve the current Forest Service R-8 standard for acceptability (acceptability requires a MOS > 100 or, a HQ of <= 1.0 depending on the methodology employed in the risk assessment to reflect potential risk), additional risk management is to be undertaken to reduce unacceptable risks to acceptable levels or an alternative method of treatment should be used. At present the most current FS risk assessments (found on the WO website; produced for the FS by Syracuse Environmental Research Associates (SERA)) employ HQ so the standard is <= 1.0. Should contractor or methodology change during this planning period, an at least equally restrictive standard should be imposed to define acceptable risk.

## Timber Management

### Salvage

- FW-109:** The maximum size of openings allowed for harvesting timber as a result of fire, wind, ice, snow, and insect attacks will be determined on a case-by-case basis.
- FW-110:** There are no dispersion requirements for salvage treatment areas.
- FW-110a:** When leaving a partial forest canopy during a salvage operation resulting from a forest pest (e.g. gypsy moth or southern pine beetle), tree species susceptible to that pest should not be retained.
- FW-110b:** In order to favor desirable species, consider post-harvest salvage treatments on lands suitable for timber harvest with site index 70+, including:
- Installation of tree shelters on existing advanced reproduction of hardwood species.
  - Planting of hardwood species at approximately 45 feet spacing (22 trees per acre) where natural advanced reproduction is inadequate.
  - Release of trees in tree shelters from competing vegetation.

### Harvesting Methods

- FW-111\*:** Use advanced harvesting methods (such as cable or helicopter) on sustained slopes 35 percent or greater to avoid adverse impacts to the soil and water resources.

### Rotations

- FW-112:** The following rotation ages are specified for lands that are suitable for timber production.

**Table 4.2 Rotation Ages**

Working Group	Rotation Ages
Upland hardwoods	80-180
Cove hardwoods	70-180
White pine	60-100
Yellow pine	60-100
Scarlet oak/Black oak	60-100

- FW-113:** Allow harvesting of trees prior to rotation age during the first cutting cycle in order to meet long-term desired condition of a particular management prescription. Regeneration harvesting cuts are not scheduled prior to culmination of mean annual increment (CMAI).

**Table 4.3 Age Working Groups Reach CMAI**

Working Group	CMAI Age
White Pine	55
Mixed pine-hardwood	55
Upland Hardwoods	65
Southern Yellow Pine	45

### **Even-aged and Two-aged Management**

- FW-114\*:** The maximum size of an opening created by even-aged or two-aged regeneration cutting is 40 acres. Exceptions to these acreage limitations may be permitted following review by the Regional Forester. These acreage limits do not apply to areas treated because of natural catastrophic conditions such as fire, insect or disease attack, or windstorm. Areas managed as permanent openings (e.g. meadows, old fields, wildlife openings, roads, and utility corridors) are not subject to these standards and are not included in calculations of opening size, even when within or adjacent to created openings.
- FW-115:** Separate even-aged or two-aged harvest units from each other by a minimum distance of 330 feet (5 chains). Such openings may be clustered closer than 330 feet as long as their combined acreage does not exceed the maximum opening size. An even-aged regeneration area will no longer be considered an opening when the certified reestablished stand has reached an age of 5 years.
- FW-116:** Even-aged or two-aged regeneration cutting may be scheduled next to uneven-aged stands at any time.

### **Regeneration Harvests**

- FW-117:** Regeneration cutting on lands suitable for timber production must be done under a regeneration harvest method where adequate stocking of desirable species is expected to occur within 5 years after the final harvest cut. The new stand must meet the minimum stocking levels as described below. These apply to both artificial and natural means of stand regeneration. Where natural means are used and stand re-establishment has not been accomplished within 3 years after committing the stand to regeneration, the stand is re-examined for further treatment needs.

**Table 4.4 Stocking Levels**

Forest Type	Number of Stems Per Acre <sup>1</sup>		
	Minimum Level	Desired Level	Maximum Level
White Pine	150	250 - 300	500
Mixed pine-hardwood	200	400 - 600	900
Hardwoods	150	250 - 300	500
Yellow Pine	300	500 - 700	900

<sup>1</sup>The levels are guides and are used in conjunction with professional judgment to determine acceptable restocking levels for a specific site.

- FW-118\*:** No heavy equipment is used for site preparation on sustained slopes over 35 percent.

### **Uneven-aged Management**

- FW-119:** Uneven-aged regeneration methods are limited to lands (except as noted below) that are at least 100 acres in size, with slopes less than 30 percent, and within ½ mile of existing roads. Uneven-

- aged harvest methods can occur on slopes steeper than 30 percent with low impact harvesting systems.
- FW-120:** Uneven-aged regeneration methods are allowed on lands other than listed in FW-119 when site-specific project objectives include canopy gap creation, scenic enhancement, or restoration/enhancement of old growth forest conditions.
- FW-121:** There are no dispersion requirements, as discussed in FW-115, for openings created by uneven-aged regeneration methods. Cutting cycles will vary from 5-20 years depending upon management objectives.
- FW-122:** The maximum size limit of group selection openings is 2 acres.

### **Non-Timber Forest Products**

- FW-123:** Unless specifically designated on use permits, collection of non-timber forest products (other than fuelwood) is prohibited within 100 feet of roads and trails in order to disperse collection impacts. Cutting of dead or down trees by personal use permit for fuelwood purposes is allowed Forest-wide from existing roads, except where prohibited by management prescription direction.
- FW-124\*:** Collection of botanical products is subject to the following restrictions:
- Collection of threatened, endangered, sensitive or locally rare species is not permitted except for research purposes.
  - Commercial moss collection is prohibited.
  - Collection of ginseng and golden seal is prohibited.
  - Collection within 50 feet of a perennial or intermittent stream is limited to those species that cannot be feasibly collected on upland sites (i.e., no collection of *Rhododendron* is allowed within riparian areas because it can be collected on upland sites.)
  - For ground disturbing activities (transplants, root digging, etc.) a maximum of 10 plants will be allowed per permit, with no more than one permit sold to an individual per month.
  - Non-destructive collection activities (fruits, seed collection, cuttings, etc.) are allowed for species other than threatened, endangered, sensitive or locally rare species.

### **Log Landings and Skid Trails**

- FW-125:** Log landings will be located outside of riparian corridors.
- FW-126:** All equipment used for harvesting and hauling operations will be serviced outside of riparian corridors.
- FW-127:**
- FW-128:** When necessary, landings will be ripped to a depth of 6-8 inches to break up compaction, and to ensure soil productivity and the successful reestablishment of vegetation.
- FW-129:** Skid trails may cross riparian corridors at designated crossings. If crossing a perennial or intermittent stream is unavoidable, use a temporary bridge or other approved method within the State Best Management Practices (BMPs). All streams are crossed at as close to a right angle as possible. Stabilization of skid trails will occur as soon as possible to minimize soil movement downslope.
- FW-130:**

- FW-131:** Skidding of trees should be directed in a manner that prevents creation of channels or gullies that concentrate water flow to adjacent streams.
- FW-132:** Temporary stream crossings will be removed and rehabilitated.
- FW-133:** Dips or waterbars or other dispersal methods will be constructed and maintained to direct stormwater off skid trails and reduce potential sediment flow to streams.
- FW-133a:** Designated trails will not be used as skid trails. Crossing of designated trails should be minimized and should occur at right angles to the extent feasible. Implement needed restorative measures to damaged trail tread and profile as soon as practicable upon completion of vegetation management activities.

## **Wildland Fire Management**

- FW-134a:** When used for control lines, trails (including tread, structures and improvements) will be restored to pre-burn conditions as soon as practicable.
- FW-134b:** Fire control lines (whether constructed by hand or mechanically) that tie into travelways (trails, roads, etc.), will be obliterated and the topography restored to original contour as soon as possible following the fire.

### **Wildfires**

- FW-134:** Ensure firefighter and public safety as the first priority. Secondly, protect property and natural and cultural resources based on the relative values to be protected. (*FSM 5103.1(1) & 5130.43(1)*)
- FW-135:** Suppress human-caused wildland fires (either accidental or arson). (*FSM 5103.2(2)*)
- FW-136:** The full range of suppression tactics (from full suppression to monitoring) may be used, consistent with forest and management prescription area direction. (*FSM 5131.13(2) & (3)*)
- FW-137:** Suppress wildland fires at minimum cost, considering firefighter and public safety, benefits, and values to be protected, consistent with resource objectives.
- FW-138:** Where needed to prevent erosion, firelines are revegetated and water-barred promptly after the fire is controlled.
- FW-139:**
- FW-140:** Lightning-caused fires are allowed to play their natural ecological role as long as they occur within prescribed weather and fuel conditions and do not pose unmitigated threats to life and/or private property, particularly to that property within the wildland/urban interface zone.

### **Prescribed Fire**

- FW-141:** Use existing barriers, e.g. streams, lakes, wetlands, roads, and trails, whenever possible to reduce the need for fireline construction and to minimize resource impacts.
- FW-142:** Best available smoke management practices will be used to minimize the adverse effects on public health, public safety and visibility in Class I areas (James River Face Wilderness and Shenandoah National Park) from prescribed fire.
- FW-143:** Conduct prescribed burning only if meteorological conditions ensure that smoke will be carried away from areas with a high forecasted Air Quality Index (Orange or higher).
- FW-144:** All managed burns will comply with Smoke Management Programs for Virginia and West Virginia, when these are implemented. (Per EPA's "Interim Air Quality Policy on Wildland and Prescribed Fires" which was developed with involvement of the USDA Forest Service).

- FW-145\*:** Identify caves or abandoned mines that contain significant populations of bats as smoke-sensitive targets. Avoid smoke entering these caves or mines when bats are hibernating (generally this is Nov 1 to April 1).
- FW-146:** Do not conduct prescribed fires when the Keetch-Byram Drought Code (Cumulative Severity Index) is 200 points above the average for the relevant time of the year.
- FW-147:** Do not plan prescribed fires in mesic deciduous forest communities (northern hardwood, mixed mesophytic, and river floodplain hardwood) that do not contain a significant oak component. When practical and without resulting in increased fireline construction or jeopardizing firefighter safety, avoid burning these communities when implementing prescribed fires in adjacent forest communities.
- FW-148:** When necessary to include mesic deciduous forest communities within burning blocks, direct firing will not be done unless necessary to secure control lines. In these cases, allow low intensity fires. Exceptions are allowed when the fire is designed to encourage oak regeneration.
- FW-149:** Maintain and restore table mountain pine and pitch pine forests through prescribed fires that produce moderate to high intensity with moderate severity.

### ***Other Fuels Treatment***

- FW-150\*:** Only mowing, chopping, or shearing treatments are used on sustained slopes over 15 percent. No heavy equipment is used for mechanical fuels treatments on sustained slopes over 35 percent.

## **Recreation**

### ***Developed Recreation***

- FW-151:**  
**FW-152:**

### ***Backcountry Recreation***

- FW-153:**

### ***Trails***

- FW-154:** The Appalachian Trail standards are addressed in the standards for Management Prescription Area 4A.
- FW-154a:** Management activities along system trails should be implemented with sensitivity to the users. Measures to reduce the visibility of activities might include vegetative screening; the temporary re-routing of trail segments; temporary trail closure, and denoting project time to occur outside high use periods.
- FW-155:** Trails are closed to motorized recreation use unless designated otherwise.
- FW-156:** Motorized use of the trail system is permissible for administrative purposes, emergencies, and at road crossings, when the trail is specifically designated for motorized use, or when the trail is on or coincident with an open public road.
- FW-157:** Any new trail construction or reconstruction is carefully located to avoid impacts to threatened, endangered, sensitive, or locally rare species habitat.

- FW-158:** 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 are 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.
- FW-159\*:** If unacceptable resource damage is identified, that section of the trail will be closed, and be re-routed if possible, until the damage is repaired. Trail could be permanently closed if necessary.

### ***Recreation Opportunity Spectrum***

The Recreation Opportunity Spectrum (ROS) inventory completed for this Forest Plan is displayed on a Map accompanying this Forest Plan.

- FW-160:** **FW-161:** New structures and facilities are constructed and maintained to meet the adopted ROS class for the area.
- FW-162:** Recreation opportunity maps will govern all new projects, including special uses. Existing conditions may not meet the assigned ROS classes.
- FW-163:**
- FW-164:**
- FW-165:** Maintain existing unimproved roads and motorized trails within semi-primitive motorized areas to a standard necessary to protect soil, water, and biological resources while maintaining an off-highway type recreation experience.
- FW-166:**
- FW-167:**
- FW-168:**

### ***Off-Highway Vehicles (OHVs) and All-Terrain Vehicles (ATVs)***

- FW-169\*:** Designated use areas for ATVs are managed under Management Prescription 7C.
- FW-170:** OHV use on open public roads is limited to licensed vehicles and operators that comply with motor vehicle laws of the state.
- FW-171:** Full size off-highway vehicles are permitted on Forest Service roads open to the public. These vehicles must be street legal and properly licensed. Trail use is not permitted.
- FW-172:** ATVs are restricted to routes (roads and trails) specifically designated as open to such vehicles.
- FW-173:** Cross-country motorized use, off open and designated roads and trails, is prohibited except in the case of emergency, e.g. wildland fire or search and rescue.
- FW-174\*:** Improving and expanding existing ATV trails is given priority consideration over designating new areas.
- FW-175\*:** ATV routes are preferred that can provide a two-hour or longer riding experience and that have looping characteristics or are a part of a larger transportation system.
- FW-176:**
- FW-177:**
- FW-178:**

FW-179:

FW-180:

FW-181:

### ***Wild & Scenic River Management***

See Management Prescription Areas 2C2 and 2C3.

**FW-182:** Protect the outstandingly remarkable values and free-flowing condition of the eligible Wild and Scenic River segments.

### **Scenery**

**FW-183:** The Scenery Management System guides protection and enhancement of scenery on the George Washington National Forest. The Scenic Class inventory, including Landscape Visibility, Concern Level, and Scenic Attractiveness, is maintained, refined, and updated as a result of site specific project analysis. The Standards under each Management Prescription Area refer to Scenic Class inventory as updated.

**FW-184:** The Forest Scenic Integrity Objectives (SIOs) Maps govern all new projects (including special uses). Assigned SIOs are consistent with Recreation Opportunity Spectrum management direction. Existing conditions may not currently meet the assigned SIO.

**FW-185:** Lands mapped as Concern Level 1 middleground from travelways (see glossary) and use areas will be inventoried as Scenic Class 2 or higher and will be managed for an SIO of Moderate or higher.

**FW-186:** Shape and orient vegetative management openings in the forest canopy to contours and existing vegetation patterns to blend with existing landscape characteristics. Shape and feather edges in High and Moderate SIO areas. Some edges may not need feathering to meet the SIO. Do not use geometric shapes.

**FW-187:**

**FW-188:** Apply leave tree and unit marking to not be visible within 100 feet of concern level 1 and 2 travelways and use areas.

**FW-189:** Remove, burn, chip or lop slash when visible within a 100-foot zone of concern level 1 & 2 travelways and use areas. These treatments result in an average slash height of 2 feet of the ground.

**FW-190:** Design and construct roads to blend with the desired landscape character in form, line, color and texture.

**FW-191\*:** During temporary or permanent road construction, eliminate or remove from view, slash and root wads as viewed from the immediate foreground of High and Moderate SIO viewing platforms to the extent possible. Some slash may be aligned parallel to roads at the base of fill slopes to collect silt.

**FW-192\*:** During vegetative management activities, remove or place out of sight root wads and other unnecessary debris within 150 feet of key observation points on concern level 1 and 2 travelways and use areas.

**FW-193\*:** Locate log landings, roads and bladed skid trails out of view to avoid bare mineral soil observation from Concern Level 1 travel routes and viewing platforms.

**FW-194:**

**FW-195\*:** Exclude gravel pits and borrow areas from the foreground of concern level 1 travelways and use areas.

- FW-196\*:** In Very High and High SIO areas, accomplish mowing or bush hogging as soon as practicable following plant mortality resulting from roadside herbicide treatment.
- FW-197:**
- FW-198:** Structures have finishes that reduce contrast with the desired landscape character.
- FW-199\*:** Selectively remove trees where outstanding views can be revealed at high use areas, vista points, and along interpretive trails.
- FW-200\*:** During vegetative management activities, when consistent with other objectives, favor flowering and other visually attractive trees and understory shrubs when leaving vegetation.
- FW-201:** Favor 14 inch and larger trees in a mixture with other smaller sized tree stems when creating spatial diversity along travelways and in recreation use areas. Provide a range of tree diameters.
- FW-202:** When engaged in scenery enhancement activities, introduce or favor native wildflowers, shrubs, and/or trees with showy flowers, fall foliage, and/or fruits.
- FW-202a:** Prescribed fire is allowed to mimic wildfire in areas with Very High, High or Moderate scenic integrity objectives, restoring a historic landscape character that includes a mosaic of closed and open canopy forest and a diversity of forest structures including grass/forbs, understory, mid-story and overstory components. Elements that are not natural appearing, such as roads and firelines, do not remain visually evident.

## Cultural Resources

- FW-203:** Coordinate inventory, evaluation, nomination, protection, enhancement, and interpretation procedures with the appropriate State Historic Preservation Officer (SHPO), Advisory Council on Historic Preservation (ACHP), and Tribal Historic Preservation Officer (THPO) as necessary before project decisions.
- FW-204:** Projects are designed to avoid, minimize, or mitigate negative effects on potentially significant cultural resources. In-place protection of identified sites is the minimum requirement until site significance is determined.
- FW-205:** Evaluations are scheduled and conducted if a project would have any effect on a cultural resource potentially eligible for the National Register of Historic Places. Evaluations are scheduled and conducted if the responsible official and State Heritage Preservation Office (SHPO) disagree on whether a heritage resource is potentially eligible for the National Register of Historic Places.
- FW-206:** Decision documents (Record of Decision, Decision Notice or Decision Memo) will evidence compliance with the NHPA, 36 CFR 800, and other cultural resource-related federal laws and regulations, as appropriate. A project (or undertaking) not in compliance will be suspended by the Forest Supervisor until compliance is documented.
- FW-207:** A consultation with the SHPO and Advisory Council on Historic Preservation is in order when it is determined that the project would affect an eligible site, and the project cannot be relocated or modified to avoid the site.
- FW-208\*:** Consultation will include, when necessary, federally recognized Native American tribes with geographic or cultural ties to the Forest, pursuant to provision in the Archeological Resources Protection Act (ARPA), National Historic Preservation Act (NHPA), American Indian Religious Freedom Act (AIRFA), and the Native American Graves Protection and Repatriation Act (NAGPRA). Forest Cultural Resources staff will develop mechanisms for consultation. Provide for traditional use or collection of forest resources by Native Americans pursuant to provision in the Food, Conservation and Energy Act of 2008.
- FW-209\*:** A Section 106 Memorandum of Agreement (MOA) will be negotiated with the SHPO, ACHP, and federally recognized American Indian Tribes with ancestral connections to the area and implemented in those situations where a cultural resource that is eligible for or included in the

National Register of Historic Places cannot be avoided and will be adversely affected by a proposed project per 36 CFR 800.5 and 36 CFR 800.6.

**FW-210:** Ensure that Section 106 compliance clauses are inserted in contracts and sales documents, and that clauses are discussed in pre-work conferences.

**FW-211:** If additional evidence or information regarding a “not significant” property becomes available, it will be re-evaluated.

## **Rangeland Resources**

**FW-212:** Where rangeland facilities or practices are identified as contributing to the degradation of water quality, aquatic species, scenic resources, rare communities, or federally listed or sensitive species habitat, remedial actions may include changes in management strategy, alteration, temporary closure, relocation, or discontinuance of the permit.

**FW-213:**

## **Minerals and Geologic Resources**

### **Geologic Resources**

**FW-214:** Locate and design facilities and management activities to avoid, minimize, or mitigate negative effects on geologic resources with identified values (scientific, scenic, paleontologic, ecological, recreational, drinking water, etc.).

**FW-215\*:** Identify, using the appropriate type and scale of geologic mapping, the geologic components (processes, structures, materials, and landforms) relevant to proposed projects, and integrate the components into: 1) siting and design of the project; 2) restoration; 3) ecological sustainability; and 4) environmental analysis.

**FW-215a:** Locate and design projects to minimize potential adverse effects on groundwater and groundwater dependent ecosystems. In karst areas, integrate geologic assessment in project design and monitoring.

### **Geologic Hazards**

**FW-216\*:** Locate, design, and maintain trails, roads, other facilities, and management activities to avoid, minimize, or mitigate geologic hazards and potential impact on infrastructure and public safety.  
For ground-disturbing projects on slope gradients of 50% or greater located upslope and within one-half mile of Forest external boundary, consider a geologic hazard and risk assessment of off-Forest public safety for landslides, including debris flows.

### **Federal Leasable Minerals - General**

**FW-217:** Following exploration and production operations, the permittee is responsible for reclaiming disturbed sites in accordance with an approved reclamation plan. Reclamation shall meet the requirements of 36 CFR 228. Plans will consider opportunities to enhance the desired condition of the particular management prescription.

### ***Federal Leasable Minerals - Oil and Gas***

**FW-218\*:** The USDA-Forest Service makes administratively available National Forest System lands, except lands withdrawn from mineral leasing by Congress or lands administratively unavailable in the management prescriptions. Standard lease terms and conditions, stipulation for Lands of the National Forest System, and No Horizontal Drilling Stipulation are used. Horizontal drilling for gas or oil is not allowed. Additional stipulation(s) may be specified by the individual management prescription. This availability is valid until the Forest Service provides the Bureau of Land Management written notification that availability is being withdrawn or amended.

**FW-219:**

**FW-220\*:** Operations will comply with environmental protection standards from several sources: Forest Plan standards for the management prescription where the operations will occur; lease terms and conditions; federal Onshore Oil and Gas Orders; Oil and Gas Resources regulations (36 CFR228 E); Conditions of Approval in Applications for Permits to Drill; and Federal and State regulations to protect soil, surface water, groundwater, riparian, and aquatic resources and to reclaim areas affected by oil and gas activities.

### ***Federal Leasable Minerals - Other than Oil and Gas***

**FW-221:** When not specifically noted in the individual management prescription as Congressionally withdrawn or administratively unavailable, other Federal leasable minerals are available.

### ***Federal Leasable Minerals - Coal***

**FW-222\*:** Operations will follow Federal and State regulations to protect soil, surface water, groundwater, riparian, and aquatic resources and values; and to reclaim areas affected by mining activities.

### ***Mineral Materials***

**FW-223:** Mineral materials (36 CFR 228c) are available for commercial, personal, free, and administrative uses.

### ***Rock, Mineral, and Fossil Collection***

**FW-224:** Except for archaeological sites, caves, or in Wilderness, the public can collect small quantities of rocks, minerals, and invertebrate fossils for non-commercial purposes (scientific, educational, and recreational, including recreational gold panning). If such activities would involve motorized excavation equipment or significant disturbance, then a Permit would be required. Collecting for commercial purposes requires a Permit.

### ***Reserved and Outstanding Minerals***

**FW-225:** The exercise of outstanding rights shall be in accordance with terms of the deed of separation, as well as applicable State and Federal laws and regulations.

**FW-226:** The exercise of reserved rights shall be in accordance with the deed, the Secretary of Agriculture's rules and regulations within the deed, and applicable State and Federal laws.

**FW-227:** The Forest Plan, including Management Prescriptions and Forest-wide Direction, is subject to outstanding and reserved mineral rights. Priorities to acquire private mineral rights through purchase, exchange or donation are in the following areas: designated Wilderness; designated Wild and Scenic Rivers; and Special Biological Areas. Until such private rights are acquired, the exercise of reserved and outstanding mineral rights to explore and develop mineral resources will be respected.

**FW-228:** All projects (including special designations, grants and agreements, special uses, and interagency agreements) or consideration of special designations shall include a review of the status of private mineral rights. Where private rights could be negatively affected, the public involvement process will inform and seek comments from the current owners of private mineral rights. The potential effects on private mineral rights will be assessed.

**FW-229:** Where reserved or outstanding mineral rights are involved, the mineral owner is encouraged to implement all surface-disturbing activities outside riparian areas.

## **Infrastructure**

### **Facilities, Roads and Access**

**FW-230\*:** All existing open roads and trails should remain open for public travel unless any of the following occurs:

- Use causes unacceptable resource damage;
- The road or trail is unsafe for public use;
- Use conflicts with management prescription or forest-wide direction;
- Closures or restrictions are needed to meet other resource needs.
- Funds will not be available to maintain the road or trail commensurate with Objective Maintenance Level; or
- Public right-of-way does not exist.

**FW-231:** New construction of local roads is managed as closed to public use unless the following conditions are met:

- Use is compatible with the recreation opportunity for the area;
- Public safety is provided for;
- Road serves an identified public need;
- The area accessed by the road and associated uses can be managed in accordance with management prescription and forest-wide direction considering available financial and personnel resources; or
- Funds are available for maintenance, or cost-sharing or volunteer maintenance can be arranged.

**FW-232:** Roads are seasonally or temporarily closed to motorized public use if there is a temporary or recurring need to:

- Prevent unacceptable resource damage;
- Prevent conflicts with the recreational opportunity established for the area;
- Protect property or public safety during resource management activities;
- The facility serves a seasonal or temporary management objective; or
- Reduce the need for additional maintenance associated with damage to the roadbed and/or surface that might occur during adverse weather or seasonal conditions.

### **Road Construction**

**FW-233:** Roads are designed and constructed to the standard necessary to provide access and manage resources according to management prescription desired conditions and public safety.

**FW-234\*:** Use revegetation during seeding seasons on construction sites where slopes are greater than 5%.

FW-235: All new and reconstructed roads will blend into the landscape to the extent practical.

FW-236:

### **Road Maintenance**

FW-237: Maintenance, reconstruction to a higher standard, or relocation of an existing road is allowed to reduce environmental damage, to improve user safety, or where agreed, to be turned over to the State.

FW-238: Apply the level of maintenance needed to protect the investment, facilitate resource management, and provide for user safety.

### **Road Decommissioning**

FW-239: Closed system roads are planted with native or desirable non-native wildflowers, forbs, shrubs, and/or grasses.

FW-240: Closed system roads and wildlife linear strips may continue to be used for administrative and emergency access.

### **Facilities**

FW-241: Design and maintain facilities to incorporate the principles of sustainability, reflect their place within the natural and cultural landscape, and provide optimal service to customers and cooperators.

FW-242:

FW-243: Before old buildings and other man-made structures are structurally modified or demolished, they will be surveyed for bats. If significant bat roosting is found, maintain these structures or provide alternate roosts suitable for the species and colony size prior to building modification or destruction.

## **Lands and Special Uses**

### **Special Use Authorizations**

FW-244: Evaluate new special use authorizations using the criteria outlined in 36 CFR 251.54 and according to Forest Service policy. Limit to needs that cannot be reasonably met on non-NFS lands or that enhance programs and activities. Locate uses where they minimize the need for additional designated sites and best serve their intended purpose. Require joint use on land when feasible.

FW-245: Do not allow recreation residences.

FW-246: Do not authorize new individual well/spring permits. Phase out existing uses when possible, as this is usually a need that can be met on private land.

### **Linear Rights-of-Way and Communication Sites**

FW-247: Develop and use existing corridors and sites to their greatest potential in order to reduce the need for additional commitment of lands for these uses. When feasible, expansion of existing corridors and sites is preferable to designating new sites.

- FW-248:** Following evaluation of the above criteria, decisions for new authorizations outside of existing corridors and designated communication sites will include an amendment to the Forest Plan designating them as Prescription Area 5B or 5C.
- FW-249:** Design new towers and ridge top developments to mitigate collision impacts to migratory birds through coordination of project planning and implementation with the U.S. Fish and Wildlife Service.
- FW-250:** Locate new communications equipment on existing towers or other structures where possible. Where new tower construction is unavoidable, structures will use minimum safety lights required by the Federal Aviation Administration, daytime visual markers on guy wires, and down-shielded security lighting. At sites that do not currently have towers in excess of 199 feet or those that require lighting, height of new towers will not exceed 199 feet above ground level and/or exceed the height at which the FAA requires that the tower has lighting.
- FW-251:** Require holders of communication use authorizations to remove communications towers no longer in use or determined to be obsolete.
- FW-252:**
- FW-253:** Specify management requirements for permittee access roads in the designated use permit, where roads are included in the authorization.
- FW-254:** Place distribution lines for utilities underground, unless the environmental impacts of doing so exceed those of placing them above ground.

### ***Land Adjustment***

- FW-255:** Land acquisitions will be guided by the following criteria:
- Priority Acquisitions: (in order of priority)
1. Lands needed for the protection of federally listed endangered or threatened fish, wildlife, or plant species.
  2. Lands needed for the protection of significant historical or cultural resources, when these resources are threatened or when management may be enhanced by public ownership.
  3. Lands within Congressionally designated wilderness boundaries.
  4. Lands that provide an unbroken public right-of-way for the Appalachian National Scenic Trail consistent with the current policy statement for Appalachian Trail acquisition.
  5. Lands needed for protection and management of Congressionally designated areas, including wilderness.
  6. Environmentally sensitive lands such as rare communities, wetlands and old growth.
  7. Lands that promote more effective management of the ecosystem and reduce administrative expenses through consolidation of national forest system ownership.
  8. Lands that enhance recreation opportunities, public access, and protection of aesthetic values.
  9. Lands needed to enhance or protect watershed improvements that affect the management of National Forest riparian areas.
  10. Consolidation of split estates.
- FW-256:** When compatible, manage new land acquisitions according to the adjacent or surrounding Management Prescription(s). When not compatible, conduct an environmental analysis and prepare the appropriate decision document to amend this Forest Plan.

**FW-257:** Land conveyances will be guided by the following criteria. Management Prescription OB outlines the management of small, isolated land areas in Chapter 3 until they can be conveyed to private ownership.

1. Lands inside or adjacent to communities or intensively developed private land, and chiefly valuable for non-National Forest System purposes.
2. Parcels that will serve a greater public need in state, county, city, or other Federal agency ownership.
3. Inaccessible parcels isolated from other National Forest System lands. Parcels intermingled with private lands.
4. Parcels within major blocks of private land, the use of which is substantially for non-National Forest System purpose.
5. To support more efficient management, parcels having boundaries, or portions of boundaries, with inefficient configurations (projecting necks or long, narrow strips of land, etc.)
6. Parcels that have substantial structural improvements that are authorized under a special use permit/lease if overall goals and objectives can be met.

### ***Right-of-Way Acquisition***

**FW-258:** Access should be acquired through purchase or exchange from other agencies, states, counties, and private interests to assure management objectives are met for all ownerships.

## MANAGEMENT PRESCRIPTION AREAS

### 1A DESIGNATED WILDERNESS

There are six Congressionally designated Wildernesses (Ramseys Draft, Rich Hole, Rough Mountain, St. Mary's, Priest, and Three Ridges) on the George Washington National Forest. Small portions of Barbour's Creek (20 acres) and Shawvers Run (95 acres) wildernesses that lie on the GWNF are managed under the revised Jefferson Forest Plan. The existing Wildernesses on the Forest total about 43,000 acres.

#### **Emphasis:**

The emphasis is to allow ecological and biological processes to progress naturally with little to no human influence or intervention, except the minimum impacts made by those who seek the wilderness as a special place offering opportunities to experience solitude and risk in as primitive surroundings possible.

#### **Desired Condition:**

The Wilderness Act of 1964 describes wilderness as "an area where the earth and its community of life are untrammelled by man, where man himself is a visitor who does not remain. Wilderness is an area of undeveloped Federal land retaining its primeval character and influence, without permanent improvements or human habitation, which is protected and managed to preserve its natural conditions. Wilderness generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable. It has outstanding opportunities for solitude or a primitive and unconfined type of recreation. It has at least five thousand acres of land or is of sufficient size as to make practicable its preservation and use in an unimpaired condition. And, it may also contain ecological, geological, or other features of scientific, educational, scenic, or historic value."

These areas retain a natural evolving landscape character shaped primarily by natural processes. These landscapes feature a structurally diverse older aged forest community with a continuous forested canopy, with the exception of gaps created by storms, insects, diseases, or fire. The valued character of these landscapes is intact with no deviations.

By the year 2064, visibility will return to natural conditions as mandated by EPA's Regional Haze Regulation and Clean Air Act Amendments of 1977. Land managers interact with regional consortia of states (e.g. Visibility Improvement States and Tribal Association of the Southeast) to improve visibility conditions in the James River Face Wilderness, a Class I area. Visibility improves incrementally during this planning period as the Regional Haze Regulation is implemented (US EPA, 1997).

Natural processes will result in a large patch of late successional to old growth forest matrix. Rare communities and associated species will continue to exist. Natural disturbance events, such as insects and diseases, ice storms, and fire, play a major role in shaping future species composition and successional stages across these areas. Non-native vegetation occurs only as transients and is not self-perpetuating. Cavity trees, cull trees, standing dead trees, and down logs are common throughout the area as a result of natural mortality.

Species associated with area-sensitive mid- to late-successional forest habitats are expected to inhabit this area. Management of the area is focused on protecting and preserving the natural environment from human influences. Timber harvest is not appropriate within this prescription area. Fire may be used to restore and maintain a historic fire regime as well as reduce the risks and consequences of wildland fire escaping from the area. Integrated pest management favoring biological controls may be used to eradicate or suppress non-native invasive pests. Non-commercial felling of trees with hand tools may be used to construct and maintain trails.

Recreation management is designed to provide solitude and remoteness in the most primitive and natural recreation setting possible. To this end, access to the area is limited. Trailheads at surrounding roads are designed with sensitivity to scale and character to set the tone for experiencing a primitive recreation experience. Once in the designated wilderness, visitors on foot or horseback must rely, to varying degrees, on their own personal physical abilities and primitive recreation skills. Wilderness recreation includes inherent risks. Visitors are isolated from the sights and sounds of others and encounters with other visitors are rare. Travel within wilderness is strictly non-motorized.

The desired condition of the St. Mary's River and its tributaries is for them to be of sufficient quality to support the biota native to the streams. Until the impacts of acid deposition are negligible, the interim desired condition is that the pH and alkalinity of the streams are managed to reflect the natural conditions that would support the native biota.

Most visitor information is dispensed outside of the wilderness at trailheads and through off-site public information and education efforts. Wilderness visitors are encouraged to "pack-it-in and pack-it-out" and to "leave no trace." Wilderness trails lie lightly on the land, typically narrow footpaths or horse trails with minimum directional signing that blends well with the natural surroundings. Visitors are physically challenged as they ford streams and climb over downed trees.

Very few facilities are provided. Permanent human-made shelters may be present if they existed prior to wilderness designation, particularly along the Appalachian National Scenic Trail. Construction of new shelters on new sites within wilderness is not appropriate, unless there is an obvious and overriding need to protect the natural resources from visitor impacts. Structures including signs, bridges, waterbars, and constructed water sources for the comfort or convenience of visitors in wilderness are minimal. The few structures appearing in wilderness are generally for the protection of resources or were present prior to wilderness designation.

The Federal Government owns the lands within the boundaries of designated wilderness areas, both surface and subsurface, with no encumbrances.

## **1A - Designated Wilderness**

### **Standards**

#### **General**

1A-001\* With the exception of wheelchairs, motorized transport and mechanized equipment are not allowed, except in emergencies. All such uses during emergencies require advance approval. See specific exceptions in the standards under Fire, Law Enforcement, Recreation, Appalachian Trail, and Forest Health.

#### **Water, Soil, and Air**

1A-002 Maintain soils in a natural undisturbed state, except for approved watershed restoration projects, wildland fire control measures, campsite rehabilitation, and trail construction, use, and maintenance. Favor natural healing of disturbed sites.

1A-003\* Allow mitigation for acid rain and other pollution effects and evaluate on a case-by-case basis with appropriate line officer approval.

#### **Terrestrial and Aquatic Species**

1A-004 Existing old fields, wildlife openings, and other habitat improvements for fish and wildlife are not maintained, and succeed to forest, deteriorate over time, or are removed. New permanent wildlife openings are not created.

1A-005\* Allow stocking only to reestablish or maintain indigenous, threatened, endangered, or sensitive species with appropriate line officer authorization.

1A-006

### Rare Communities and Old Growth

1A-007

### Vegetation and Forest Health

- 1A-008 Forest insect and disease outbreaks are controlled only if necessary to prevent unacceptable damage to resources on adjacent land, prevent an unacceptable loss to the wilderness resource due to non-native pests, or protect threatened, endangered, and sensitive species.
- 1A-009 Use control measures that have the least adverse impact on the wilderness resource. Favor biological control methods.
- 1A-010 Actions to control Insects and diseases may be approved by the Regional Forester under the following conditions:
- There is an immediate threat of unacceptable damage to resources outside the wilderness boundary and the threat cannot reasonably be abated by control actions taken outside the wilderness boundary; or
  - There is an immediate threat of unnatural loss of the wilderness resource due to a non-native insect or disease.
- 1A-011\* Eradicate non-native invasive plants when the infestations are isolated. Use hand-applied pesticides, with appropriate line officer approval, when necessary.

### Timber Management

- 1A-012 These lands are classified as withdrawn from timber production. Timber harvest is not allowed.

### Non-timber Forest Products

- 1A-013 Do not issue authorizations for the commercial use of any forest products.
- 1A-014 Allow personal-use collection of dead and down wood only for on-site campfire use.
- 1A-015 Allow personal-use collection of non-timber forest products (nuts, berries, pinecones, etc.), provided they are not threatened, endangered, sensitive or locally rare.

### Wildland Fire Management

- 1A-016 Use Minimum Impact Suppression Tactics (MIST) which employ suppression methods and equipment that cause the least alteration of the wilderness landscape, least disturbance of the land surface, least disturbance to visitor solitude, least reduction of visibility during periods of visitor use, and least effects on air-quality-related values.
- 1A-017\* Wildland fire is allowed to restore and maintain natural communities and to reduce a buildup of fuels to an acceptable level and to decrease the risks and consequences of wildland fire escaping from wilderness.
- 1A-018
- 1A-019 With the exception of firelines, only allow rehabilitation of a burned area if necessary to prevent an unacceptable loss of wilderness resources or to protect resources outside the wilderness. Revegetation work will use plant species native to the wilderness area.

### Recreation

- 1A-020 Wilderness areas are managed for the Primitive Recreation Opportunity Spectrum (ROS) class although the inventoried ROS classes may range from Semi-Primitive Non-Motorized (SPNM) to Roaded Natural (RN).

- 1A-021 Construct, relocate, and maintain trails to the minimum standard necessary for protection of soil, water, vegetation, visual quality, user safety, and long-term maintenance. Emphasize trails that appear to be part of the wilderness environment and not an intrusion upon it.
- 1A-022 Blazing of trails is allowed only on the Appalachian Trail.
- 1A-023\* Use of hand-held power tools, like chainsaws, to reopen trails following catastrophic natural events may be authorized by the appropriate line officer.
- 1A-024 Minimize use of trail bridges or foot logs. Bridges are not installed for user convenience. Construct bridges if necessary for wilderness resource protection or for safety reasons. Design bridges to minimize impact on the wilderness resource. Select locations that minimize the size and complexity of the structure.
- 1A-025 Provide the minimum number of signs for the regulation or information of the user and the protection of the wilderness resource. Do not include distances to destination points on trail signs or directional arrows within the wilderness. Encourage use of trail maps.
- 1A-026 Groups entering the wilderness will not exceed 10 persons.

**Appalachian Trail**

- 1A-027 Plan and carry out activities in cooperation with appropriate Appalachian Trail management partners.
- 1A-028 Horse and pack stock are prohibited on the Appalachian Trail footpath.
- 1A-029 Existing Appalachian Trail shelters and associated facilities may be maintained. When existing trail shelters deteriorate to the point that they must be replaced or reconstructed, analyze the shelter location. When possible, relocate shelters to appropriate sites outside of wilderness.

**Scenery**

- 1A-030 Management activities such as trail construction, maintenance, and signing are designed to meet a Very High Scenic Integrity Objective.
- 1A-031 Non-historical remnants such as old railroad ties and culverts causing unacceptable visual impact are removed.

**Range**

- 1A-032 Livestock grazing is not permitted unless specifically authorized in the designating legislation.

**Minerals**

- 1A-033 These areas are withdrawn from Federal oil and gas and other Federal mineral leases. Allow existing Federal leases to continue until expiration. Do not reauthorize. Allow roads, pipelines, utilities, and other facilities per existing Federal leases.
- 1A-034 These areas are not available for mineral materials for commercial, personal, or free use purposes. Administrative use of mineral materials is allowed when: a) the materials are used within the wilderness itself; and b) use is necessary to protect the wilderness resource.
- 1A-035 Requests for access to a non-Federal interest in lands pursuant to a reserved or outstanding right are recognized, and reasonable access is granted. Encourage such interests to minimize surface disturbances when possible. (See also forest-wide standards under Lands).

**Roads**

- 1A-036 Do not permit road construction and reconstruction, subject to valid existing rights or leases.
- 1A-037 Favor natural revegetation of closed roads. Plant with native species only if the area is not expected to revegetate naturally in a reasonable time.

### **Lands and Special Uses**

1A-038

1A-039 Wilderness areas are not available for new special uses, except for research and outfitter-guide operations allowed under the Wilderness Act. Phase out existing non-conforming uses.

1A-040 Allow commercial use by outfitters and guides if compatible with preservation of the wilderness values. Do not allow contest events such as foot races or horseback endurance events. Require outfitters and guides to use leave-no-trace techniques. Do not allow permanent camps.

1A-041 Limit the size of commercial and organized groups to 10.

1A-041a These areas are unavailable for wind energy development.

### **Research and Monitoring**

1A-042 Evaluate research proposals and scientific studies for which use of a wilderness is essential. Allow research that is compatible with wilderness management objectives.

1A-043\* Allow collection of specimen plants for research with appropriate line officer authorization.

### **Law Enforcement and Search and Rescue**

1A-044 The county or counties where the wilderness areas are located have the responsibility for search and rescue of lost or injured visitors. Forest personnel will provide assistance when requested for such things as scouting services, detailed maps, aerial photography, and detailed information about the area.

1A-045\* Require appropriate line officer approval for motorized equipment for search-and-rescue and law enforcement operations within the wilderness area in advance. Use of motorized equipment is limited to emergencies involving inescapable urgency such as: (a) health and safety, (b) law enforcement involving serious crimes or fugitive pursuit, (c) removal of deceased persons, and (d) aircraft accident investigation.

## **1B RECOMMENDED WILDERNESS STUDY AREA**

The areas that are recommended to Congress for wilderness study include one new area and three additions to existing Wilderness that includes the following areas (as mapped): Little River (9,300 acres), Rich Hole Addition (4,700 acres), Ramseys Draft Addition (6,100 acres) and St. Mary's-West Addition (300 acres). The recommended wilderness study areas total about 20,400 acres.

### ***Emphasis:***

Pending legislation as to their classification, these areas are managed to protect the qualities that were the basis for recommending wilderness study, while also providing for existing uses where compatible with protecting wilderness character.

### ***Desired Condition:***

The desired condition is to retain the remote character and recreation opportunities in this area. Existing roads, trails, and wildlife improvements can be maintained using current practices. New facilities are not allowed. The area is a priority for road and facility decommissioning and soil and water improvements. Timber harvest is not appropriate within this prescription area. This type of management is to continue until Congress decides whether to include the area in the national wilderness preservation system.

## **1B - Recommended Wilderness Study Area**

### ***Standards***

#### **General**

1B-001

1B-002\* Allow motorized equipment for the purpose of meeting prescription area objectives and removal of man-made elements not compatible with wilderness character prior to congressional designation as Wilderness.

#### **Terrestrial and Aquatic Species**

1B-002a Existing old fields, pastoral areas, wildlife openings, and other wildlife habitat improvements may be maintained. Expansion of existing openings and/or creation of new openings are not allowed.

#### **Vegetation and Forest Health**

1B-002b Allow control of insect and disease outbreaks when necessary to prevent a threat to adjacent property, protect the scenic and recreational values, to reduce hazards to visitors, or for safety and legal reasons. When actions are needed, first consider biological controls, secondly hand-control methods, and finally pesticides. Utilize the least ecologically disruptive technique that will accomplish control of the pest.

1B-002c

1B-002d Tree cutting may occur incidental to other management activities such as trail construction, trail maintenance, removal of hazard trees, fireline construction, etc. Mechanical equipment such as chainsaws is permitted.

#### **Timber Management**

1B-003 These areas are classified as unsuitable for timber production, pending final Congressional action.

### **Non-timber Forest Products**

- 1B-003a Do not issue authorizations for the commercial use of any forest products.
- 1B-003b Allow personal-use collection of dead and down wood only for on-site campfire use.
- 1B-003c Allow personal-use collection of non-timber forest products (nuts, berries, pinecones, etc.), provided they are not threatened, endangered, sensitive or locally rare.

### **Wildland Fire Management**

- 1B-004 Allow rehabilitation of firelines and the burned area to prevent an unacceptable loss of future wilderness resources or to protect resources outside the area. Revegetation work will use plant species native to the area. Evidence of firelines is obliterated as soon as practicable.
- 1B-005 Wildfires and prescribed fires are allowed to reduce a buildup of fuels, to restore native forest communities, to maintain threatened, endangered, sensitive, and locally rare species habitat, and to decrease the risks and consequences of wildland fire escaping from the area.
- 1B-006 Allow rehabilitation of firelines and the burned area to prevent an unacceptable loss of future wilderness resources or to protect resources outside the area. Revegetation work will use plant species native to the area. Evidence of firelines is obliterated as soon as practicable.

### **Recreation**

- 1B-007\* Decommissioning of facilities that are not compatible with a wilderness designation is a priority.
- 1B-007a Recommended wilderness study areas are managed for the Primitive Recreation Opportunity Spectrum (ROS) class although inventoried ROS classes may range from Semi-Primitive Non-Motorized (SPNM) to Roded Natural (RN).
- 1B-007b Construct, relocate, and maintain trails to the minimum standard necessary for protection of soil, water, vegetation, visual quality, user safety, and long-term maintenance. Emphasize trails that appear to be part of a wilderness environment and not an intrusion upon it.
- 1B-007c Minimize use of trail bridges or foot logs. Bridges are not installed for user convenience. Construct bridges if necessary for resource protection or for safety reasons. Design bridges to minimize impact on the wilderness resource. Select locations that minimize the size and complexity of the structure.
- 1B-007d Use of bicycles on existing trails can continue. Trails may be maintained but will not be improved to facilitate bicycle use.

### **Minerals**

- 1B-008 These areas are administratively unavailable for federal oil and gas and other federal mineral leases, pending final Congressional action. Allow existing Federal leases to continue until expiration. Do not reauthorize. Allow roads, pipelines, utilities, and other facilities per existing Federal leases.
- 1B-009 These areas are not available for mineral materials for commercial, personal, or free use purposes. Administrative use of mineral materials is allowed.
- 1B-010 Requests for access to a non-Federal interest in lands pursuant to a reserved or outstanding right are recognized, and reasonable access is granted.

### **Scenery**

- 1B-010a Management activities such as trail construction, maintenance, and signing are designed to meet or exceed a High Scenic Integrity Objective in all scenic classes.

### **Roads**

- 1B-011 Do not permit road construction and reconstruction, subject to valid existing rights or leases.

- 1B-012\* Roads are a priority for decommissioning.
- 1B-012a Existing roads can be maintained at their current level.

**Lands and Special Uses**

- 1B-012b These areas are not available for new special uses, except for research and outfitter-guide operations allowed under the Wilderness Act. Phase out existing long-term non-conforming uses.
- 1B-012c Allow commercial use by outfitters and guides if compatible with preservation of the wilderness values. Require outfitters and guides to use leave-no-trace techniques.
- 1B-012d These areas are unavailable for wind energy development.

## 2C2 - Eligible Scenic Rivers

About 55 miles are eligible for the National Wild and Scenic River System under the scenic river designation. Scenic rivers have corridor widths of 1/4-mile on each side of the river. For river segments that are eligible for designation, their outstandingly remarkable values and free flowing conditions that made them eligible are maintained. The eligible portions of these rivers and the one-quarter mile wide corridors on each side are managed to meet the requirements of the Wild and Scenic Rivers Act of 1968. The corridors of these eligible scenic rivers total about 3,800 acres on the Forest.

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."

**Table 4.5 Eligible Scenic Rivers on the GWNF**

Eligible Scenic Rivers
Segment A of Back Creek
Cedar Creek
Segment B of Jackson River
Segment C of Jackson River
Segment B of North River
Segment B of Tye River

### **Emphasis:**

The primary emphasis of these rivers and their associated corridors is to protect and enhance the outstandingly remarkable scenic and geologic values as well as perpetuate the undeveloped setting and non-motorized access that led to the "scenic" classification. These river segments will be preserved in a free-flowing condition for the benefit, use, and enjoyment of present and future generations.

### **Desired Condition:**

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 them 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 river's current conditions. Characteristics of the rivers and their corridors are not reduced below the standards for classification as a Scenic River.

The river and a one-quarter mile corridor on each side exist in a natural to near-natural setting and possess outstanding scenic quality. These areas retain a natural evolving landscape character shaped primarily by natural processes. The valued character of these landscapes is intact with no deviations. 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 side slopes into the river.

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 primitive character of the surrounding landscape. Opportunities for wildlife viewing are good. In some areas the hydrologic processes over time have exposed geologic features.

Water-based recreation activities such as swimming, wading, fishing, canoeing, rafting, and kayaking occur in the rivers. 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.

Access to scenic river segments is provided at select locations. Emphasis on facilities is on health, safety, and resource protection plus some degree of user convenience. Roads, trails, and dispersed campsites are managed to discourage impacts to lakes, streams, and fragile soil resources.

Lands within scenic river corridors are classified unsuitable for timber production.

Recreation management is designed to provide solitude and remoteness in the most primitive and natural recreation setting possible. To this end, access to the area is limited to roads outside of the corridor, except reasonable access necessary to exercise development of private mineral rights. Trailheads at perimeter roads are designed with sensitivity to scale and character to perpetuate the scenic integrity of the area.

Signs are designed to complement the natural environment in scale, character, and color. Most visitor information is provided outside of the scenic river corridor at trailheads and through off-site public information and education efforts. Scenic river visitors are encouraged to "pack-it-in and pack-it-out" and to "leave no trace."

Wildland fires may be used to restore and maintain the historic fire regime. Integrated pest management favoring biological controls may be used to eradicate or suppress non-native invasive pests. Non-commercial felling of trees may be used to construct and maintain trails.

## **2C2 - Eligible Scenic Rivers**

### **Standards**

#### **General**

2C2-001 All management activities within this corridor must be compatible with the outstandingly remarkable values for the River.

#### **Water, Soil, and Air**

2C2-002 Maintain soils in a natural, undisturbed state, except for approved watershed restoration projects, wildland fire control measures, campsite rehabilitation, and trail construction, use, and maintenance. Favor natural healing of disturbed sites.

2C2-003 Instrumentation necessary for monitoring reference watershed conditions is allowed. Such instrumentation is designed to be unnoticeable to visitors.

#### **Terrestrial and Aquatic Species**

2C2-004 Existing old fields, wildlife openings, and other habitat improvements for fish and wildlife are maintained when they enhance the outstanding scenic values of the river corridor. New permanent wildlife openings are not created.

2C2-005 Allow stocking only to reestablish or maintain indigenous, threatened, endangered, or sensitive species with Forest Supervisor authorization.

#### **Rare Communities and Old Growth**

2C2-006

2C2-007

#### **Vegetation and Forest Health**

2C2-008 Suppression and eradication actions to control gypsy moth infestations are allowed.

2C2-009 Actions to eradicate or suppress hemlock woolly adelgid infestations are allowed.

2C2-010 Eradicate non-native invasive plants when the infestations are isolated. Use hand-applied pesticides, with Forest Supervisor approval, when necessary.

2C2-011 Felling and leaving of individual trees is allowed for public safety and trail maintenance within appropriate trail clearing limits.

2C2-012 Allow vegetation management activities to:

- Maintain or enhance outstandingly remarkable values of the river corridor;
- Enhance or rehabilitate scenery;
- Provide for public health and safety.

#### **Timber Management**

2C2-013 These lands are classified as unsuitable for timber production. Timber harvest is not allowed unless associated with reasonable access to valid existing rights.

#### **Non-timber Forest Products**

2C2-014 Do not issue authorizations for the commercial or personal use of any forest products.

#### **Wildland Fire Management**

2C2-015

2C2-016 Vegetation management may be accomplished with wildfires and prescribed fire along with mechanical treatments as an appropriate method of reducing costs associated with these activities.

#### **Scenery**

2C2-017 Management activities are designed to meet or exceed a High Scenic Integrity Objective in all scenic classes.

#### **Recreation**

2C2-018 Eligible Scenic River corridors are managed with a range of recreation opportunities from roaded natural to semi-primitive motorized and semi-primitive non-motorized.

2C2-019 These corridors are unsuitable for designation of new All-Terrain Vehicle routes or use areas.

2C2-020 Restore existing trail including steps and bridges, when necessary, using native materials and Civilian Conservation Corps construction techniques.

2C2-021 Provide the minimum number of signs for the regulation or information of the user and the protection of the scenic values.

**Minerals**

- 2C2-022 These areas are available for federal oil and gas leasing with controlled surface use to protect the geologic resources and ecological values of the area. Other Federal minerals may be available on a case-by-case basis after full consideration of effects on geologic resources and ecological values.
- 2C2-023 These areas are not available for mineral materials for commercial, personal, or free use purposes. Administrative use of mineral materials is allowed to (a) administer the area; (b) protect geologic resources and ecological values; (c) restore riparian areas and aquatic habitat; (d) control erosion and sedimentation; or (e) repair flood damage.

**Roads**

- 2C2-024 Road construction is not allowed, subject to valid existing rights.

**Lands and Special Uses**

- 2C2-025 These areas are unsuitable for designation of new utility corridors, utility rights-of-way, communication sites or wind energy development. Existing uses may continue unless removal is necessary to protect the outstandingly remarkable values of the river.

## 2C3 ELIGIBLE RECREATIONAL RIVERS

The following rivers are eligible for the National Wild and Scenic River System under the recreational river designation. There are approximately 200 miles that qualify as recreational rivers. Recreational rivers have corridor widths of 1/4-mile on each side of the river. For river segments that are eligible for designation, their outstandingly remarkable values and free flowing conditions that made them eligible are maintained. The eligible portions of these rivers and the one-quarter mile wide corridors on each side are managed to meet the requirements of the Wild and Scenic Rivers Act of 1968. The corridors of these eligible scenic rivers total about 4,200 acres on the Forest.

As described in the Act, recreational 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."

Table 4.6 Eligible Recreational Rivers on the GWNF

Eligible Recreational Rivers
Segment B of Back Creek
Segments A & B of Cowpasture River
Segment C of Passage Creek
Segment D of Jackson River
North Fork of Shenandoah River
South Fork of Shenandoah River

### **Emphasis:**

These river segments and their associated corridors are eligible to be a part of the National Wild and Scenic Rivers System. They are managed to protect and perpetuate the outstandingly remarkable values that led to their eligibility status and classification as "recreational."

### **Desired Condition:**

The primary emphasis for management of the river and river corridor is to protect and enhance the outstandingly remarkable values of that river or river segment. The recreational river corridor provides outstanding opportunities for people to enjoy a wide variety of river oriented recreation opportunities in an attractive setting. The river is readily accessible by roads and may be accessed by railroads as well. Transportation facilities may parallel the river for long stretches.

There is a low need for visitors to rely on their personal physical abilities and primitive recreation skills within these areas. The sights and sounds of other visitors are evident, and opportunities to encounter other visitors are moderate to high. Visitors seeking solitude may find that difficult to achieve, particularly in peak use seasons. Trails may be highly developed, including hardened trails for a high level of accessibility for persons of all abilities. Motorcycles and/or all-terrain vehicles may be permitted on designated trails.

The landscape character ranges from natural appearing to transitional-mixed use. There is substantial evidence of human activity along the shores of these rivers on adjoining private lands, sometimes including modern residential development, commercial structures, and a full range of various agricultural and forestry uses. On National Forest System lands, visitors enjoy a natural-appearing setting with a range of man-made recreational developments. Prescribed fire, felling and removal of trees, domestic livestock grazing, and integrated pest management activities may be observed. Utility transmission corridors, communication facilities, or signs of mineral development activity associated with reserved and outstanding mineral rights may be observed as well as controlled mineral activities under lease and use of mineral materials. The goal is to blend these uses into the background so that they remain visually subordinate to the natural landscape.

Existing scenic integrity may range from High to Very Low, but the objectives on National Forest System lands are Moderate or higher.

Since there is the potential for large numbers of visitors at peak use seasons, regulations are necessary for protection of resources and visitors. Information is provided at bulletin boards or kiosks at the river, as well as at off-site Forest Service visitor centers and in brochures. Visitors are encouraged to practice minimum impact techniques while recreating. Trash receptacles may be provided at parking areas and high use areas. Facilities of a modern nature are present to provide for visitor safety and comfort and to protect the river resources. Facilities are designed to fit the character of the specific sites where they are located. This could range from semi-primitive to rural. Facilities might include parking areas, trailheads, bulletin boards, interpretive kiosks, signs, restrooms, canoe/raft launches, fishing platforms, picnic sites, etc.

These areas are characterized by a predominance of mid- and late-successional forests with a high to intermediate tolerance to shade. Forest structure varies according to ecological factors, but largely consists of a mature overstory of hardwoods, occasionally mixed with pines, a fairly open midstory, and a well-developed herbaceous and shrubby understory. Structural diversity within mixed mesophytic and dry-to-mesic oak forest communities may be enhanced through commercial and non-commercial vegetation management activities. Understory vegetation includes a variety of native deciduous and evergreen flowering trees, shrubs and wildflowers. Even- and uneven-aged forest communities are managed throughout the area, along with continued development of medium and small patches of late successional to old growth forest communities. Wildlife viewing opportunities are maintained and expanded and up to four percent of forested land may be in early-successional forest conditions created both naturally and purposefully when compatible with the outstandingly remarkable values of the river corridor. Management activities and controls ensure rare communities and associated species continue to exist in the area.

## **2C3 - Eligible Recreational Rivers**

### **Standards**

#### **General**

2C3-001 All management activities within this corridor must be compatible with the outstandingly remarkable values for the River.

#### **Terrestrial and Aquatic Species**

2C3-002 Allow creation of up to four percent early-successional forest habitat.

2C3-003 Existing old fields, pastoral areas, wildlife openings, and other wildlife habitat improvements may be present and maintained. Expansion of existing openings and/or creation of new openings may occur. Non-invasive non-native plant species are sometimes used when establishing food plants for wildlife, but native species are preferred. Some openings provide permanent shrub/sapling habitats as a result of longer maintenance cycles.

#### **Rare Communities and Old Growth**

2C3-004

#### **Vegetation and Forest Health**

2C3-005 Allow salvage of dead, dying, or damaged trees to maintain or enhance outstandingly remarkable values.

2C3-006 Allow vegetation management activities to:

- Maintain or enhance outstandingly remarkable values of the river corridor;
- Enhance or rehabilitate scenery;

- Maintain developed recreation facilities, including roads and trails;
- Enhance both game and non-game wildlife habitat;
- Improve threatened, endangered, sensitive, and locally rare species habitat;
- Maintain rare communities and species dependent on disturbance;
- Maintain, enhance, or restore the diversity and complexity of native vegetation;
- Suppress or control insect and disease outbreaks;
- Control non-native invasive vegetation;
- Reduce fuel buildups; or
- Provide for public health and safety.

2C3-007 Aggressively control insect and disease outbreaks when threatening the outstandingly remarkable values of the river corridor or when needed for safety or legal reasons. Consider eradication of recently established non-native pests. Favor the most effective control method.

**Timber Management**

2C3-008 These lands are classified as unsuitable for timber production. Vegetation management may be accomplished with commercial timber sales as an appropriate method of reducing costs associated with these activities.

**Wildland Fire Management**

2C3-009 Wildfires are generally suppressed to minimize acreage burned due to high levels of public use and infrastructure investments in these corridors.

2C3-010 Vegetation management may be accomplished with wildfires and prescribed fire along with mechanical treatments as an appropriate method of reducing costs associated with these activities.

**Recreation**

2C3-011 These corridors are unsuitable for designation of new All-Terrain Vehicle routes or use areas.

**Scenery**

2C3-012 Management activities are designed to meet or exceed the following Scenic Integrity Objectives:

Inventoried Scenic Class	1	2	3	4	5	6	7
Scenic Integrity Objectives	H	H	M	M	M	M	M

H=High; M=Moderate

**Minerals**

2C3-013 These corridors are available for federal oil and gas leasing with controlled surface use to protect the outstandingly remarkable resources of the river. Other Federal minerals may be available on a case-by-case basis.

2C3-014 Permit mineral materials for commercial, personal, free, and administrative use purposes with conditions to protect the outstandingly remarkable resources of the river corridor.

2C3-015 Some of these areas are underlain by private mineral rights. Requests for access to a non-Federal interest in lands pursuant to a reserved or outstanding right are recognized, and reasonable access is granted. Encourage such interests to protect outstandingly remarkable values when possible.

**Roads**

2C3-016

2C3-017 Allow road construction or reconstruction to improve recreational access, improve soil and water, to salvage timber, or to protect property or public safety.

2C3-018 Decommission roads that are causing environmental damage, degrading outstandingly remarkable values, or to manage visitor use and access.

**Lands and Special Uses**

2C3-019 These areas may be suitable for new utility structures, such as new transmission, gas, or water lines, only in the location with the least impacts to scenic integrity.

2C3-020 Screen overhead utility lines and support towers.

2C3-021 Allow other special uses when consistent and compatible with protection of the outstandingly remarkable values of the river corridor.

2C3-021a These areas are unavailable for wind energy development.

## **4A APPALACHIAN NATIONAL SCENIC TRAIL CORRIDOR**

Additional management direction for management of the Appalachian Trail corridor can be found in: National Trails System Act (Public Law 90-543, as amended); Appalachian Trail Comprehensive Plan; Landscape Aesthetics (Agriculture Handbook 701); Forest Service Directives (FSM, FSH, and supplements); Appalachian Trail Design, Construction, and Maintenance (ATC Stewardship Manual, second edition, 2000); Appalachian Trail Overnight-Use Management Principles; Checklist for the Location, Construction, and Maintenance of Campsites and Shelters on the Appalachian Trail (ATC Stewardship Series, revised 1989); Local Management Plans for the Appalachian Trail; Wilderness Act of 1964; Eastern Wilderness Act of 1975; Virginia Wilderness Acts; Numerous Memoranda of Agreement and Memoranda of Understanding between the USDA Forest Service, the National Park Service.

This prescription area consists of those lands mapped as the foreground area visible from the Appalachian National Scenic Trail<sup>4</sup> footpath, and—as designated on a case-by-case basis—associated trail shelters, overnight use sites, viewpoints, water sources and spur trails. This prescription area also includes all National Forest System lands acquired by the National Park Service for the Appalachian Trail and administratively transferred to the USDA Forest Service by the National Park Service under a Memorandum of Agreement. The Appalachian National Scenic Trail Corridor on the GWNF is a total of about 8,500 acres.

The Appalachian National Scenic Trail is administered by the Secretary of the Interior in consultation with the Secretary of Agriculture, and is managed as a partnership between the Forest Service, the National Park Service Appalachian Trail Park Office, the Appalachian Trail Conference, and Appalachian Trail Conference-affiliated local Appalachian Trail clubs. Management is in accordance with the National Trails System Act and the Appalachian Trail Comprehensive Plan utilizing the cooperative management system.

### ***Emphasis:***

Management practices are designed to protect the Appalachian Trail experience, preserve and strengthen the role of volunteers and volunteer organizations, provide opportunities for high quality outdoor recreation experiences, and provide for the conservation and enjoyment of the nationally significant scenic, historic, natural and cultural qualities of the land through which the Trail passes. Lands adjoining the prescription area seen from the Appalachian Trail will be managed for multiple use under the provisions of this plan, in a manner which will reasonably harmonize with and be complementary to the Appalachian Trail experience.

### ***Desired Condition:***

The Appalachian Trail is a way, continuous from Katahdin in Maine to Springer Mountain, Georgia, traversing the George Washington National Forest for travel on foot through the wild, scenic, wooded, pastoral, and culturally significant lands of the Appalachian Mountains. The Appalachian Trail is usually a simple footpath, purposeful in direction and concept, favoring the heights of land, and located for minimum reliance on construction for protecting the resource. The body of the Trail is provided by the lands it traverses, and its soul is in the living stewardship of the volunteers and workers of the Appalachian Trail community.

Views from the Appalachian Trail are predominantly forested, sporadically intermixed with meadows, old fields, pastoral valleys, and cultural landscapes. Occasionally, the Appalachian Trail traverses high elevation balds and openings, which afford hikers unique and outstanding views. The Appalachian Trail offers a diversity of topography and a variety of vegetation and animal life exposing the hiker to the entire range of land forms, water features, history, and uses of the land that are found along the Appalachian Mountains.

The prescription area consists of those lands mapped as foreground from the Appalachian Trail footpath and designated viewpoints, shelters, campsites, water sources, and spur trails linking these features, utilizing the Scenery Management System. The prescription area has a minimum width of 100 feet on either side of the Appalachian Trail footpath for protection from social, aural, and other impacts, but this minimum width should

be considered only when the foreground zone does not extend beyond 100 feet on either side of the Appalachian Trail footpath.

Facilities include the Appalachian Trail footpath itself, shelters approximately one day's hike apart, designated overnight-use sites, privies, trailhead parking areas, and information boards at road crossings. The footpath itself wears lightly on the land, and is designed, constructed, and maintained for foot travel only. Associated structures are in harmony with the surrounding environment.

This prescription area traverses a range of Recreation Opportunity Spectrum classes. Management of the Appalachian Trail setting will either be consistent with or complement the semi-primitive non-motorized Recreation Opportunity Spectrum class. The linear nature of this prescription area is recognized in determining the Recreation Opportunity Spectrum class.

Recreation management is designed to provide a variety of opportunities in the most primitive and natural recreation setting possible. Careful acquisition and trail design has allowed an appearance of a more primitive setting than the Recreation Opportunity Spectrum would predict. Trailheads are designed with sensitivity to scale and character to set the tone for a non-motorized experience. Motorized recreation, bicycles, horses, and pack stock are not allowed on the Appalachian Trail footpath; although there are some rare exceptions (see Standards). Roads within ½ mile of the Appalachian Trail are managed with hiker security, safety, and Appalachian Trail values in mind.

Roads, utility transmission corridors, communication facilities, or signs of mineral development activity exist or may be seen within the prescription area, although the goal is to avoid these types of facilities and land uses to the greatest extent possible and blend facilities which cannot be avoided into the landscape so that they remain visually subordinate.

This prescription area retains a natural, forested or pastoral landscape character shaped by both natural processes and humans. Management practices are modified to recognize the nationally significant aesthetic and recreational values of these lands. Low intensity vegetation management is appropriate to maintain the long term goals and stewardship objectives of the Appalachian National Scenic Trail prescription area. Management activities needed to preserve or create vistas and desirable open areas are a high priority. Activities are planned and carried out in cooperation with appropriate Appalachian Trail management partners.

This prescription area is characterized by a predominance of mid- and late-successional forests with multiple canopy layers, which provide a variety of habitat niches, and thermal and protective cover for wildlife. Small to medium patches of old growth forest communities continue to develop throughout this area. Existing levels of early successional habitat conditions are maintained including: meadows, old fields, and openings created by flooding, wind damage, wildland fire, insect/disease infestations, or vegetation management activities. Occasional large openings of early successional habitat may be maintained as old fields and pastoral landscapes, as well as created through natural disturbance.

## **4A - Appalachian National Scenic Trail Corridor**

### **Standards**

#### **Terrestrial and Aquatic Species**

- 4A-001 Maintain the existing early-successional forest habitat within this prescription area when compatible with Appalachian Trail values. Take advantage of natural disturbance events and continued maintenance of existing openings to meet the needs for early successional habitats.
- 4A-002 To enhance the Appalachian Trail environment, wildlife and fish habitat improvements are allowed. Existing wildlife openings, pastoral areas, or old fields may be maintained. Expansion of existing openings and/or creation of new openings may occur when compatible with Appalachian

Trail values. Maintenance methods may include cultivation, grazing, herbicides, mowing, and prescribed burning. Use of native species will be emphasized.

4A-003

#### **Vegetation and Forest Health**

4A-004 Vegetation is managed only to enhance the Trail environment. Allow timber harvest, prescribed burning, wildfire, hand tools, power tools, mowing, herbicides, biological controls, and grazing to manage vegetation as appropriate. Vegetation management activities are limited to:

- Maintain open areas, old field habitats, and vistas that enhance the scenic qualities of the Appalachian Trail;
- Control insects and diseases;
- Maintain or improve threatened, endangered, sensitive, and locally rare species habitat;
- Maintain rare communities, species dependent on disturbance, and wildlife viewing opportunities;
- Meet trail construction and maintenance needs, including shelters;
- Manage fuels;
- Restore, enhance, or mimic historic fire regimes;
- Control non-native invasive vegetation;
- Provide for public safety or resource protection.

#### **Timber Management**

4A-005 The lands in this prescription area are classified as unsuitable for timber production.

4A-006 Hauling or skidding along the Appalachian Trail footpath itself or using the Appalachian Trail for landings or temporary roads is prohibited. Hauling and skidding within the prescription area will be allowed only if the environmental analysis indicates that this is the only feasible and prudent alternative.

#### **Wildland Fire Management**

4A-007\* Suppression strategies will strive to minimize impact on Appalachian Trail values and implement Minimum Impact Suppression Techniques (MIST) tactics whenever possible.

4A-008 Prohibit heavy equipment line construction on the Appalachian Trail footpath, unless necessary for emergency protection of public property and safety.

4A-009 Implement restorative measures in areas damaged by fire-suppression efforts after fire-suppression efforts have ceased.

4A-010

4A-011

#### **Recreation**

4A-012 Motorized, horse, pack stock, and bicycle use on the Appalachian Trail are prohibited. Exceptions include where the Appalachian Trail crosses or is located on open Forest Service system roads; other federal, state, county or other public roads or as needed for management of the Appalachian Trail; or for administrative or emergency purposes.

- 4A-013 Other uses within the prescription area, including crossings of the Appalachian Trail, may be considered following coordination with appropriate Appalachian Trail partners. Locate authorized uses crossing the Appalachian Trail to minimize impacts to the Appalachian Trail environment, preferably where impacts already exist.
- 4A-014 Overnight camping will be allowed, unless prohibited by Forest Supervisor's order.
- 4A-015 Identify the Appalachian Trail through standard signs and blazes.
- 4A-016 Locate and maintain shelters, campsites, and privies where there is a demonstrated need for overnight use.
- 4A-017 Reconstruct or relocate existing portions of the Appalachian Trail as needed to enhance the recreation experience, protect threatened, endangered, sensitive, and locally rare species; protect the health of the ecosystem; or protect cultural resources. Such relocations provide a reasonable level of public safety.
- 4A-018 Limit additional development to facilities compatible with the Appalachian Trail.
- 4A-019 This area is unsuitable for designation of new All-Terrain Vehicle use areas.

**Scenery**

- 4A-020 All management activities will meet or exceed a Scenic Integrity Objective of High.

**Minerals**

- 4A-021 The prescription area is available for oil and gas leasing with a "no surface occupancy" stipulation. The area is not available for other Federal leasable minerals. When existing leases terminate or expire, new leases are changed to reflect this standard.
- 4A-022 These areas are not available for mineral materials.

**Roads**

- 4A-023 Authorize new roads within the Appalachian Trail prescription area only if entering the prescription area is the only feasible and prudent location.

**Lands and Special Uses**

- 4A-024 Issue non-recreational special-use authorizations only where compatible with Appalachian Trail management or where there is a demonstrated public need or benefit and where no other reasonable alternatives exist.
- 4A-025 Authorize recreational special uses only when they do not adversely affect Appalachian Trail values and resources as described by this management prescription. Limit recreation events such as foot races or horseback endurance events to designated crossings only. Only temporary authorizations of one year or less for use of the footpath are allowed due to the probability of changing trail conditions or management needs except for existing permits. Existing permits may be renewed when there is no proposed change in use, or changes in trail conditions or management needs. Permits will not be issued for overnight camping at Appalachian Trail shelters or within 300 feet of the footpath.
- 4A-026 Do not authorize vendor or peddler permits.
- 4A-027 Allow agricultural special-use authorizations to maintain open and pastoral spaces.
- 4A-028 Locate new public utilities and rights-of-way in areas of this management prescription area where major impacts already exist. Limit linear utilities and rights-of-way to a single crossing of the prescription area, per project.
- 4A-029 Require mitigation measures including screening, feathering, and other visual management techniques to mitigate visual and other impacts of new or upgraded utility rights-of-way. Mitigation measures apply to facilities as well as vegetation.

4A-030 This management prescription area is unsuitable for special-use authorizations for new communication sites and wind generation sites.

## **4B - Little Laurel Run Research Natural Area**

Research Natural Areas (RNAs) are part of a national network of ecological resources designated for research, education and maintenance of biological diversity on National Forest System lands. These areas are designated by the Regional Forester, U.S. Forest Service. Research Natural Areas are principally for non-manipulative research, observation, and study.

The Little Laurel Run Research Natural Area (2,092 acres) was established in 1938 and is located on the North River Ranger District. The other research natural area is the Ramseys Draft Research Natural Area (established in 1935, 1,794 acres) which is within the Ramseys Draft Wilderness and therefore, managed under that wilderness direction.

### ***Emphasis:***

Manage for scientific research in an undisturbed state as a baseline for comparison with other forest environments.

### ***Desired Condition:***

The RNA and its ecosystems continue to furnish ecological information of value to the Forest Service and society at large. The area continues to be representative of the ecosystems it was established to represent. The landscape character will be natural evolving. Human uses are not causing detectable ecological change.

Species which occur in vegetation types influenced by natural environmental and ecological processes predominate. Visitors to a Research Natural Area can expect to see examples of the natural plant communities native to that physiographic region.

Vegetation is influenced by natural processes. The lands are classified as unsuitable for timber production.

### ***Standards***

#### **Vegetation and Forest Health**

- 4B-001 Native forest insect and disease outbreaks are controlled only to protect threatened, endangered, and sensitive species or to prevent unacceptable damage to resources on adjacent land. Non-native invasive insects and diseases may be eradicated or suppressed. Favor biological control methods.
- 4B-002 Eradicate non-native invasive plants when the infestations are isolated. Use hand-applied pesticides, with Forest Supervisor approval, when necessary.

#### **Timber Management**

- 4B-003 These lands are classified as unsuitable for timber production. No timber harvest shall be allowed, except as may be necessary in the control of fire, insects, and diseases; or to provide for public safety and trail access.

#### **Non-timber Forest Products**

- 4B-004 Do not permit the collection of non-timber forest products, except for scientific purposes as permitted by the Forest Supervisor.

#### **Wildland Fire Management**

- 4B-005 Wildfires and prescribed fire are allowed to maintain the Prescription Area emphasis.

**Recreation**

4B-006 These areas are unsuitable for designation of new All-Terrain Vehicle use areas.

**Scenery**

4B-007 Management activities are designed to meet a Very High Scenic Integrity Objective.

**Minerals**

4B-008 Little Laurel Run NRA is available for federal oil and gas leasing with no surface occupancy stipulations to protect threatened, endangered, sensitive, and locally rare species. Other Federal minerals may be available on a case-by-case basis after full consideration of effects on threatened, endangered, sensitive, and locally rare species. Because Ramseys Draft RNA occurs within an existing wilderness, it is not available for federal oil and gas leasing or other Federal minerals.

4B-009 These areas are not available for mineral materials for commercial, personal, or free use purposes.

4B-010 Although no private mineral rights occur within Ramseys Draft RNA, Little Laurel Run NRA is subject to partial interest in outstanding mineral rights. Roads, wells, and other necessary infrastructure associated with these rights are allowed. Requests for access to a non-Federal interest in lands pursuant to a reserved or outstanding right are recognized, and reasonable access is granted. Encourage such interests to minimize disturbance to threatened, endangered, sensitive, and locally rare species habitat.

**Roads**

4B-011 Roads that do not contribute to the objective of preserving the natural ecosystem and not needed for administrative purposes are closed and allowed to naturally revegetate. Other measures, such as seeding or planting, may be used if conditions warrant.

4B-012 Road construction is not normally permitted inside the area.

**Lands and Special Uses**

4B-013 These areas are unsuitable for designation of new utility corridors, utility rights-of-way, or communication sites or wind energy development.

4B-014 Special uses consistent with the Chief's establishment report could occur.

## **4C1 GEOLOGIC AREAS**

Two areas of the Forest are identified as Geologic Areas for their unique geological resources: Devils Garden (75 acres) on the Lee Ranger District and Rainbow Rocks (100 acres) on the James River Ranger District. In addition, nineteen cave sites are identified. One of the cave sites is in wilderness, two sites are located in Special Biologic Areas, two sites are within the Indiana bat protection areas, and the rest are in this management prescription area. The total acreage of this management prescription area is about 3,900 acres.

### ***Emphasis:***

Geologic Areas are managed to highlight and protect unique geologic resources as well as to develop public understanding of, and appreciation for, the influence of geology on the ecology and human history. Management focus is on protection of these sensitive areas and on showcasing the unique and scenic geologic resources.

### ***Desired Condition:***

Sensitive karst areas are protected from human-caused detrimental hydrologic and habitat change. Recreational access through these areas may be limited in order to protect geologic resources. Geologic Areas provide outstanding opportunities for people to learn about the natural history of the Forest. Safe, barrier-free public access by road and trail may be provided and is designed to protect sensitive geologic resources. Where public access is unrestricted, interpretive information is available to develop understanding of the importance of protecting the geologic and biologic communities of the area.

Natural processes will eventually result in small to medium patches of late successional to old growth forest matrix dominated by shade tolerant hardwoods and eastern white pines throughout most of this area. Rare communities and associated species will continue to exist in the area. Insects and diseases play a major role in shaping future species composition and successional stages across these areas, however, integrated pest management favoring biological controls may be used to eradicate or suppress non-native invasive pests. Non-native vegetation occurs only as transients and is not self-perpetuating. Cavity trees, cull trees, standing dead trees, and down logs are common throughout the area as a result of natural mortality.

## **4C1 - Geologic Areas**

### ***Standards***

#### **Water, Soil, and Air**

4C1-001 Protect sensitive karst areas from human-caused detrimental hydrologic and habitat change.

#### **Terrestrial and Aquatic Species**

4C1-002 Existing old fields, wildlife openings, and other habitat improvements for fish and wildlife may be present and maintained, but no expansion of openings or creation of new permanent openings of this type occurs. Native species are emphasized when establishing food plants for wildlife. Some openings provide permanent shrub/sapling habitat as a result of longer maintenance cycles.

#### **Vegetation and Forest Health**

4C1-003 Native forest insect and disease outbreaks are controlled only to prevent unacceptable damage to resources on adjacent land or to protect threatened, endangered, and sensitive species. Non-native invasive insects and diseases may be eradicated or suppressed. Favor biological control methods.

4C1-004 Eradicate non-native invasive vegetation when the infestations are isolated. Use hand-applied pesticides, with Forest Supervisor approval, when necessary.

- 4C1-005 Prescribed fire, use of wildland fire, integrated pest management, and felling of trees are allowed to:
- provide for public health and safety;
  - maintain developed recreation facilities, including roads and trails;
  - maintain rare communities and species dependent on disturbance;
  - reduce fuel buildups; or
  - control non-native invasive vegetation.

#### **Timber Management**

- 4C1-006 These lands are classified as unsuitable for timber production. Timber harvest is not allowed unless associated with salvage or reasonable access to valid existing rights.
- 4C1-007 Salvage of dead and dying trees is only allowed when there is a threat to health and safety or ecological resources.

#### **Wildland Fire Management**

- 4C1-008 Conduct prescribed fire and wildfire management activities recognizing sensitive geologic conditions in karst areas, including ground water.

#### **Non-timber Forest Products**

- 4C1-009 Do not permit the collection of non-timber forest products, except for scientific purposes as permitted by the Forest Supervisor.

#### **Recreation**

- 4C1-010 Recreational access through these areas may be restricted in order to protect geologic resources.
- 4C1-011 These areas are unsuitable for designation of new All-Terrain Vehicle routes or use areas.

#### **Scenery**

- 4C1-012 Management activities are designed to meet or exceed a High Scenic Integrity Objective.

#### **Minerals**

- 4C1-013 These areas are available for federal oil and gas leasing with controlled surface use to protect the geologic resources and ecological values of the area. Other Federal minerals may be available on a case-by-case basis after full consideration of effects on geologic resources and ecological values.
- 4C1-014 These areas are not available for mineral materials for commercial, personal, or free use purposes. Administrative use of mineral materials is allowed to (a) administer the area; (b) protect geologic resources and ecological values; (c) restore riparian areas and aquatic habitat; (d) control erosion and sedimentation; or (e) repair flood damage.
- 4C1-015 Federal oil and gas leases and private mineral rights exist. Roads, wells, and other necessary infrastructure associated with these leases and rights are allowed. Existing lease stipulations are used to minimize environmental effects in this area. Requests for access to a non-Federal interest in lands pursuant to a reserved or outstanding right are recognized and reasonable access is granted. Encourage such interests to avoid rare communities and minimize surface disturbances.

#### **Roads**

- 4C1-016 Do not permit road construction, subject to valid existing rights and leases.
- 4C1-017 Road reconstruction and minor relocation are permitted after full consideration of effects on geologic resources and ecological values.

**Lands and Special Uses**

- 4C1-018 Locate new public utilities and rights-of-way to areas of this prescription area where major impacts already exist. Limit linear utilities and rights-of-way to a single crossing of the prescription area, per project.
- 4C1-019 Require mitigation measures including screening, feathering, and other visual management techniques to mitigate visual and other impacts of new or upgraded utility rights-of-way. Mitigation measures apply to facilities as well as vegetation.
- 4C1-019a These areas are unavailable for wind energy development.

## **4D BOTANICAL - ZOOLOGICAL AREAS (SPECIAL BIOLOGICAL AREAS)**

Biological Areas are managed to include lands that support key components and concentrations of the Forest's biological diversity. These lands serve as core areas for conservation of the most significant and rarer elements of biological diversity identified to date on the Forest. These areas or communities are assemblages of plants and animals that occupy a small portion of the landscape, but contribute significantly to biological diversity.

These areas typically include high quality ecological communities such as high elevation mountain tops, shale barrens, caves and karst features, wetlands, and diverse habitat for threatened and endangered species, sensitive and locally rare species. These lands contain individual threatened, endangered, or rare natural communities found within major forest communities. Approximately 114,000 acres are found in Special Biological Areas.

### ***Emphasis:***

These lands serve as a network of core areas for conservation of significant elements of biological diversity. The goal of designation and management of these areas is to perpetuate or increase existing individual plant or animal species and communities that are of national, regional, or state significance and identified as threatened, endangered, sensitive, or locally rare.

### ***Desired Condition:***

Botanical-Zoological areas are managed for the following: (1) protection of threatened, endangered, sensitive, or locally rare species from human taking or human-caused detrimental habitat changes; (2) stable or increasing populations of threatened, endangered, sensitive, or locally rare species; and (3) functioning ecosystems.

The natural evolving or natural appearing landscape character of these areas exhibits a variety of forested and non-forested communities frequently associated with disturbance like fire. Late successional to old growth forest communities may exist in some of these areas and additional acres will develop in future years. Ideally, natural processes within these areas proceed unencumbered by such disturbances as fire suppression, adjacent human development, and influx of non-native species. Prescribed fire, wildlife habitat improvements, integrated pest management, and occasional low intensity timber harvest may be appropriate management tools to maintain the long-term goals of the desired condition in these areas related to the improvement of threatened, endangered, sensitive, and locally rare species habitat. Specific management activities necessary to maintain, restore, or enhance threatened, endangered, sensitive, and locally rare species for each special biological area are described in the Virginia Department of Conservation and Recreation, Division of Natural Heritage, Reports of Special Biological Areas and other pertinent biological reference material.

These management activities will result in a forest successional stage appropriate for maintaining the threatened, endangered, sensitive, and locally rare species. All areas are protected from human-caused detrimental habitat change, the taking of threatened or endangered species, and the collection of living plants or animals unless such collections are used for achieving the stated management goals. Recreational access through these areas may be limited in order to protect natural cultural resources. Where public access is unrestricted, interpretive information is available to develop understanding of the importance of protecting the plant and animal communities of the area.

Access to these areas may be limited. New roads are managed as closed. New trail sections to link existing trails or for education and interpretation are considered on a case-by-case basis. Recreation opportunities are limited to interpretation, bird watching, wildlife viewing, nature photography, and hiking on non-motorized, non-mechanized foot trails.

Some of these special biological areas lie within the foreground of the Appalachian National Scenic Trail. Within the foreground of the Appalachian Trail, management practices are designed to achieve the desired

condition of this management prescription as well as protect the Appalachian Trail experience, strengthen the role of volunteers and volunteer organizations, provide opportunities for high quality outdoor recreation experiences, and provide for the conservation and enjoyment of the nationally significant scenic, historic, natural and cultural qualities of the land through which the Appalachian Trail passes.

These sites can be nominated for placement on State registries of natural areas. These voluntary agreements recognize the protection and management of natural areas that support rare species and significant natural communities.

## **4D - Botanical - Zoological Areas**

### **Standard**

*Note: Some of the Rare Communities standards (9F) are used from the Jefferson Forest Plan*

#### **General**

4D-001 In cooperation with the States' Natural Heritage agencies, make appropriate adjustments to 4D Special Biological Areas through the Forest Plan amendment process as new information becomes available.

#### **Terrestrial and Aquatic Species**

4D-002 Wildlife habitat improvements may be created, maintained, or enlarged if compatible with the habitat needs of the threatened, endangered, sensitive, and locally rare species. Only native species are used when establishing food plants for wildlife. Some openings provide permanent shrub/sapling habitats as a result of longer maintenance cycles.

4D-002a (9F-003) Existing openings or old fields are only maintained or created if they are compatible with the rare community.

4D-002b (9F-004) Control measures such as exclosures or trapping may be used where animal populations are adversely affecting rare communities.

4D-002c (9F-005) Beaver ponds and associated wetlands are managed in association with threatened, endangered, sensitive, and locally rare species. They are protected as rare communities when they support significant populations of these species or otherwise on a case-by-case basis. Other beaver populations and dams may be managed to: prevent adverse effects to public safety; roads, trails, and other facilities; private land resources; and other rare communities. Where protection of beaver ponds and associated wetlands are in conflict with other resource needs, decisions consider the beavers' role in natural processes and are based on the relative rarity of the communities and associated species involved, with the rarest elements receiving priority.

#### **Rare Communities and Old Growth**

4D-003

#### **Vegetation and Forest Health**

4D-004 Native forest insect and disease outbreaks are controlled only to prevent unacceptable damage to resources on adjacent land or to protect threatened, endangered, sensitive, or locally rare species. Non-native, invasive insects and diseases may be eradicated or suppressed to prevent a loss of the special biological community. Favor biological control methods.

4D-005 Eradicate non-native invasive plants when the infestations are isolated. Use hand-applied pesticides, with Forest Supervisor approval, when necessary.

- 4D-006 Vegetation management is allowed when compatible with the habitat needs of the threatened, endangered, sensitive, and locally rare species. Allow vegetation management activities to:
- Improve threatened, endangered, sensitive, and locally rare species habitat;
  - Restore, enhance, or mimic historic fire regimes;
  - Maintain, enhance or restore the diversity and complexity of native vegetation;
  - Reduce insect and disease hazard;
  - Control non-native invasive vegetation; or
  - Provide for public safety and trail maintenance.
- 4D-006a (9F-008) Control non-native invasive species (plants, animals, insects, and diseases) where they are causing negative effects to rare communities. Do not introduce non-native species in or near rare communities, unless it is a natural enemy of a non-native pest.
- 4D-006b (9F-009) Allow native insects and diseases to play their natural ecological role if it does not pose a threat to the resource(s) for which the area was created.
- 4D-006c (9F-010) Removal of dead and down logs or other woody debris is only allowed within 100 feet of the centerline of an open road. Where needed to ensure public or employee safety, snags may be felled, but will be retained within the community as downed wood.

#### **Timber Management**

- 4D-007 These lands are classified as unsuitable for timber production. Vegetation management may be accomplished with commercial timber sales as an appropriate method of reducing costs associated with these activities.
- 4D-007a Salvage of dead and dying trees is only allowed if compatible with the biologic resource for which the area was established.

#### **Non-timber Forest Products**

- 4D-008 Do not permit the collection of non-timber forest products, except for scientific purposes as permitted by the Forest Supervisor.

#### **Wildland Fire Management**

- 4D-009 Vegetation management may be accomplished with wildfire and prescribed fire along with mechanical treatments as an appropriate method of reducing costs associated with these activities.
- 4D-009a (9F-007) Prohibit new control line construction in or near bogs and seasonal ponds to avoid disrupting hydrology. Use existing roads, firelines, or streams to contain the burn wherever possible. Where necessary, construct new firelines by less intensive methods such as wetline and cutting back flashy fuels. Handline may be used when it is the only option available.
- 4D-009b (9F-016) Do not construct fire lines with heavy mechanized equipment (e.g. bulldozers and tractors) in rare communities when preparing for prescribed fire or managing wildfire, unless necessary to benefit or enhance the rare community (e.g. table mountain pine community).
- 4D-009c (9F-017) When necessary to include mesic deciduous forests within burning blocks, direct firing will not be done within these communities unless necessary to secure control lines. In these cases, only low intensity fires are allowed.
- 4D-009d (9F-015) Firelines constructed with heavy equipment are avoided whenever possible during wildfire management.

**Recreation**

- 4D-010 Where recreational uses are negatively affecting threatened, endangered, sensitive, and locally rare species, modify recreation sites or trails to reduce or eliminate negative effects. New or improved recreational developments are designed to avoid adverse effects to threatened, endangered, sensitive, and locally rare species.
- 4D-011 These areas are unsuitable for designation of new Off-Highway Vehicle routes or All-Terrain Vehicle use areas, unless crossing the area is the only feasible alternative or results in less environmental impact.

**Appalachian National Scenic Trail**

- 4D-012 Within the foreground of the Appalachian Trail, all activities will be planned and carried out in cooperation with the appropriate Appalachian Trail management partner(s). See Management Prescription 4A for additional management direction applicable to this corridor.

**Scenery**

- 4D-013 Management activities are designed to meet or exceed the following Scenic Integrity Objectives:

Inventoried Scenic Class	1	2	3	4	5	6	7
Scenic Integrity Objectives	H	H	M	M	M	M	M

**Minerals**

- 4D-014 These areas are available for federal oil and gas leasing with controlled surface use to protect threatened, endangered, sensitive, and locally rare species. Other Federal minerals may be available on a case-by-case basis after full consideration of effects on threatened, endangered, sensitive, and locally rare species.
- 4D-015 Permit mineral materials for commercial, personal, free, and administrative use purposes with conditions to protect threatened, endangered, sensitive, and locally rare species habitat.
- 4D-016 Federal oil and gas leases could exist in some of these areas. Roads, wells, and other necessary infrastructure associated with these leases are allowed. Existing lease stipulations are used to minimize disturbance to threatened, endangered, sensitive, and locally rare species habitat.
- 4D-017 Private mineral rights exist in some of these areas. Roads, wells, and other necessary infrastructure associated with these rights are allowed. Requests for access to a non-Federal interest in lands pursuant to a reserved or outstanding right are recognized, and reasonable access is granted. Encourage such interests to minimize disturbance to threatened, endangered, sensitive, and locally rare species habitat.

**Roads**

- 4D-018
- 4D-019
- 4D-019a (9F-027) Only permit road construction to access valid existing rights and mineral leases, if necessary to achieve the objectives of the specific SBA, or if entering the rare community to access an adjacent area results in less environmental impact. Road reconstruction and minor relocation are permitted after full consideration of effects on the rare community and associated species.

4D-019b (9F-028) New roads are engineered to minimize impacts to the rare community and managed as closed to public motorized travel.

**Lands and Special Uses**

4D-020 These areas are unsuitable for designation of new utility corridors, utility rights-of-way, communication sites or wind energy development. Existing uses may continue unless removal is necessary to protect threatened, endangered, sensitive, and locally rare species.

4D-020a (9F-030) Allow commercial use by outfitters and guides if compatible with preservation of the rare community values. Do not allow contest events such as foot races or horseback endurance events. Require outfitters and guides to use leave-no-trace techniques. Do not allow permanent camps.

4D-020b (9F-031) Limit the size of commercial and organized groups to 10.

## **4D1 KEY NATURAL HERITAGE COMMUNITY AREAS**

The two areas currently in this management prescription area are at Frozen Knob and Peters Mountain on the James River Ranger District (about 3,300 acres). These areas are dominated by dry to mesic oak dominated forest communities on geologic formations typical of the folded Appalachian ridges. The primary distinction of these two areas is the extent and older ages of much of the dominant vegetation that the Virginia Division of Natural Heritage considers to represent some of the best examples of this old growth forest type on this landform.

### ***Emphasis:***

These lands provide high quality examples of vegetation communities that are not uncommon, but have distinctive characteristics needing management direction to maintain their character and are recommended by state or federal agencies.

### ***Desired Condition:***

Key Natural Heritage Community Areas are managed to maintain and enhance the unusual character of the vegetation for which the area was identified. For Frozen Knob and Peters Mountain this character is the old-age forest.

The natural evolving or natural appearing landscape character of these areas exhibits predominantly a late successional to old growth forest community. Ideally, natural processes, including fire, within these areas proceed unencumbered and any management activity should mimic these natural processes.

All areas are protected from human-caused detrimental habitat change and the collection of living plants or animals unless such collections are used for achieving the stated management goals. Recreational access through these areas may be limited in order to protect natural heritage resources. Where public access is unrestricted, interpretive information is available to develop understanding of the importance of protecting and managing the plant and animal communities of the area.

Access to these areas may be limited. New roads are managed as closed. New trail sections to link existing trails or for education and interpretation are considered on a case-by-case basis. Recreation opportunities are limited to interpretation, bird watching, wildlife viewing, nature photography, and hiking on non-motorized, non-mechanized foot trails.

### ***Standards***

The same standards as 4D – Botanical / Zoological Areas apply to this area.

## **4E CULTURAL AREAS**

Fourteen historic sites are identified as Special Area-Historic. These areas are: Confederate Breastworks, Camp Roosevelt, Elizabeth Furnace, Callie Furnace, Catherine Furnace, Capon Furnace, Van Buren Furnace, Mount Torry Furnace, Wallace House, High Knob Tower, Hematite Mining Community, Signal Knob, Zepp Tannery site, and Warwick Mansion. Historic sites are non-renewable resources designated by federal laws to be antiquities in excess of 50 years in age that can be found on or within National Forest System lands. The acreage associated with these areas is about 3,300 acres.

### ***Emphasis:***

Cultural Areas are managed to highlight and protect unique historic resources as well as to develop public understanding of, and appreciation for, the influence of human history on the forest ecosystem. Sites are preserved and protected as appropriate in accordance with the law. Management focus is providing public access and education.

### ***Desired Condition:***

Significant cultural resources are protected from loss. Significant sites are stabilized, treated, managed and preserved for their historical research and/or cultural value. Effective relationships are maintained with Federal, State, Tribal and local governments and historic preservation organizations with interests in protecting cultural resources and promoting learning opportunities.

Cultural Areas provide outstanding opportunities for people to learn about the cultural history of the Forest and to enjoy a wide variety of recreation opportunities in an attractive setting. Safe, barrier-free public access by both roads and trails is provided and designed to protect sensitive historic resources. Sensitive resources and areas are protected from human-caused damage. Recreational access through parts of these areas may be limited in order to protect historic resources. Where public access is unrestricted, interpretive information is available to develop understanding of the importance of protecting the historic and biologic communities of the area. Interpretive materials and services are high quality and effectively communicate the influence of people on the forest ecosystem. Historic Property Plans are prepared for these areas covering site interpretation; cultural/historic resource protection; vegetation, fire, and wildlife management, and other resource uses.

There is low need for visitors to rely on their personal physical abilities and primitive recreation skills. Education and interpretation are strongly emphasized and school groups are encouraged to visit the sites. The sights and sounds of other visitors are evident and opportunities to encounter other visitors are moderate to high. Visitors seeking solitude may find that difficult to achieve, particularly in peak use seasons. Trails may be highly developed, including hardened trails and boardwalks to protect the resource and to provide for a high level of accessibility for persons of all abilities. Mountain biking, horseback riding, and dispersed camping may be confined to designated trails and areas. Other appropriate recreational activities include hiking, bird watching, photography, hunting and fishing.

Visitors enjoy a variety of forested and non-forested communities, with outstanding and interesting historic features. The landscape character is typically historic, pastoral, or cultural often showing a great deal of human influence, surrounded by a natural appearing backdrop. Late successional to old growth forest communities occur in some of these areas and additional acres may be allowed to develop in future years if consistent with the historic character of the area.

Some of these cultural areas lie within the foreground of the Appalachian National Scenic Trail. Within the foreground of the Appalachian Trail, management practices are designed to achieve the desired condition of this management prescription as well as protect the Appalachian Trail experience, strengthen the role of volunteers and volunteer organizations, provide opportunities for high quality outdoor recreation experiences, and provide for the conservation and enjoyment of the nationally significant scenic, historic, natural and cultural qualities of the land through which the Appalachian Trail passes.

Since there is the potential for large numbers of visitors at peak use seasons, regulations are necessary for protection of resources and visitors. Information is provided at bulletin boards or kiosks, as well as at Forest Service visitor's centers and in brochures. Visitors are encouraged to practice minimum impact techniques while recreating. Trash receptacles may be provided at parking areas and high use areas. Modern facilities that fit with the historic character of the area are present to provide for visitor safety and comfort and to protect resources. Facilities are designed with sensitivity to character, scale, and color, which complement the surroundings at each specific site. This could range from semi-primitive to rural. Facilities might include parking areas, trailheads, bulletin boards, interpretive kiosks, signs, restrooms, canoe/raft launches, fishing platforms, picnic sites, etc.

These areas are characterized by a full range of forest successional stages from early to mid to late. Early-successional forest conditions may be created when compatible with the cultural and historic objectives of the area. Vegetation is influenced both by natural processes and humans. Low intensity timber harvest, prescribed fire, wildlife habitat improvements, and integrated pest management are appropriate management tools to maintain the long-term goals of the desired condition related to education and interpretation of the historic uses of these areas. Wildland fires are suppressed using an appropriate management response to protect cultural resources.

## **4E - Cultural Areas**

### **Standards**

#### **General**

4E-001 All management activities within these areas must be compatible with the protection and interpretation of cultural/historic resources.

#### **Water, Soil, and Air**

4E-002 Watershed restoration work is scheduled considering protection of historic values and resource elements.

#### **Terrestrial and Aquatic Species**

4E-003

4E-004 Existing old fields, pastoral areas, wildlife openings, and other wildlife habitat improvements may be present and maintained. Expansion of existing openings and/or creation of new openings may occur. Non-invasive non-natives are sometimes used when establishing food plants for wildlife, but native species are preferred. Some openings provide permanent shrub/sapling habitats as a result of longer maintenance cycles.

#### **Rare Communities and Old Growth**

4E-005

#### **Vegetation and Forest Health**

4E-006 Control insect and disease outbreaks when necessary to protect the cultural/historic values, to reduce hazards to visitors, or for safety or legal reasons. Eradicate recently established non-native pests when possible. Favor the most effective control method.

4E-007 Non-native non-invasive species may be planted for watershed restoration purposes.

4E-008 Allow vegetation management activities to:

- Restore or maintain historic vegetative communities appropriate to the time period being emphasized;

- Demonstrate historic and present day logging systems;
- Enhance or rehabilitate scenery;
- Maintain recreation facilities, including roads and trails;
- Enhance both game and non-game wildlife habitat;
- Improve threatened, endangered, sensitive, and locally rare species habitat;
- Maintain rare communities and species dependent on disturbance;
- Reduce insect and disease hazard;
- Control non-native invasive vegetation;
- Reduce fuel buildups; or
- Provide for public health and safety.

#### **Timber Management**

4E-009

4E-010 These areas are unsuitable for timber production. Vegetation management may be accomplished with commercial timber sales as an appropriate method of reducing costs associated with these activities.

4E-011

4E-012

4E-013

4E-013a Salvage of dead and dying trees is only allowed if compatible with the cultural resources for which the area was established.

#### **Non-timber Forest Products**

4E-014

#### **Wildland Fire Management**

4E-015 A full range of suppression strategies are employed to protect cultural/historic resources that may be negatively impacted by fire.

4E-016 Vegetation management may be accomplished with wildfires and prescribed fire along with mechanical treatments as an appropriate method of reducing costs associated with these activities.

4E-017 Areas where heavy equipment fireline construction is prohibited are designated through the site plan for the area.

#### **Recreation**

4E-018 Recreational access through these areas may be restricted in order to protect historic and cultural resources.

**Appalachian National Scenic Trail**

4E-019 Within the foreground of the Appalachian Trail, all activities will be planned and carried out in cooperation with the appropriate Appalachian Trail management partner(s). See Management Prescription 4A for additional management direction applicable to this corridor.

**Scenery**

4E-020 Management activities are designed to meet or exceed the following Scenic Integrity Objectives:

Inventoried Scenic Class	1	2	3	4	5	6	7
Scenic Integrity Objectives	H	H	H	M	M	M	M

4E-021 Facilities and management activities emphasize the historic landscape character.

**Minerals**

4E-022 These areas are available for federal oil and gas leasing with no surface occupancy to protect the cultural/historic resources and values. Other Federal minerals may be available on a case-by-case basis.

4E-023 These areas are not available for mineral materials for commercial, personal, or free use purposes. Administrative use of mineral materials is allowed.

**Roads**

4E-023a Only permit road construction to access valid existing rights and mineral leases, or if entering the area to access an adjacent area results in less environmental impact. Road reconstruction and minor relocation are permitted after full consideration of effects on the cultural resources.

**Lands and Special Uses**

4E-024 These areas are unsuitable for designation of new utility corridors, utility rights-of-way, communication sites and wind generation. Continue existing uses. Require a landscape management plan with screening, feathering, and other vegetation management techniques to mitigate the visual and other impacts of new, upgraded, or reauthorized utility corridors or communication sites.

## **4F - MOUNT PLEASANT NATURAL SCENIC AREA**

### ***Emphasis:***

The 7,695-acre Mount Pleasant National Scenic Area was designated by the U.S. Congress in 1994. The purposes of the George Washington National Forest Mount Pleasant Scenic Area Act are to:

- Ensure appropriate protection and preservation of the area's scenic quality, water quality, natural characteristics, and water resources;
- Protect and manage vegetation to provide wildlife and fish habitat consistent with paragraph (1);
- Provide areas that may develop characteristics of old-growth forests; and
- Provide a variety of recreation opportunities that are consistent with the preceding purposes.

The Mount Pleasant National Scenic Area is well known for its prominent mountains, including Mount Pleasant, Pompey, and Cold Mountain, as well as the very popular Henry Lanum Memorial Trail, the Mount Pleasant Spur Trail, the Old Hotel Trail, and a portion of the Appalachian National Scenic Trail. Some of the best views on the Pedlar Ranger District are possible from Mount Pleasant and Cold Mountain.

The Congressional Act provides direction on what activities can occur and how they can occur within the Mount Pleasant National Scenic Area. The standards that follow mimic the Act. If differences in interpretation arise, the language in the Act governs (*16 U.S.C 545(b)(1)*).

### ***Desired Condition:***

The Mount Pleasant National Scenic Area offers a variety of recreational experiences that are in harmony with protecting unique biological and primitive recreation opportunities. This area is very popular for various forms of non-motorized dispersed recreation including hiking, hunting, horseback riding, and fishing.

The Mount Pleasant National Scenic Area offers excellent opportunities for solitude and serenity. The core of the Mount Pleasant National Scenic Area appears relatively remote.

As the vegetation within the Mount Pleasant National Scenic Area continues to age, there is natural mortality. Most of the Mount Pleasant National Scenic Area develops characteristics of older ecosystems.

Wildlife habitat conditions are similar to those found in Remote Backcountry areas.

## **4F - Mount Pleasant Natural Scenic Area**

### ***Standards***

#### **Terrestrial and Aquatic Species**

4F-001 Existing old fields, wildlife openings, and other habitat improvements for fish and wildlife may be present and maintained, but no expansion of openings or creation of new permanent openings of this type occurs.

#### **Vegetation and Forest Health**

4F-002 Vegetation manipulation may be practiced for the maintenance of existing wildlife clearings and visual quality.

4F-003 Insect and disease outbreaks may be controlled to maintain scenic quality, prevent tree mortality, reduce hazards to visitors, or protect private lands.

### **Timber Management**

- 4F-004 These lands are classified as unsuitable for timber production. No timber harvest shall be allowed, except as may be necessary in the control of fire, insects, and diseases; or to provide for public safety and trail access.

### **Non-timber Forest Products**

- 4F-005 Harvesting of firewood for personal use is permitted along perimeter roads.

### **Wildland Fire Management**

- 4F-006 Wildfire and prescribed fire may be used to manage the vegetation of existing wildlife clearings, provide wildlife habitat, or open areas in association with the Appalachian National Scenic Trail.

### **Recreation**

- 4F-007 For management of lands along the Appalachian Trail, follow the standards listed under Management Prescription Area 4A of this Revised Forest Plan. Where conflicts occur between management of the Appalachian Trail and provisions of the Mount Pleasant Scenic Area Act, follow the provisions of the Act.

### **Scenery**

- 4F-008 Management activities are designed to meet or exceed a High Scenic Integrity Objective.

### **Minerals**

- 4F-009 All federally-owned lands in the Mount Pleasant National Scenic Area are withdrawn from location, entry, and patent under the mining laws of the United States, and from leasing claims under the mineral and geothermal leasing laws of the United States, including amendments to such laws.

### **Roads**

- 4F-010 No new permanent roads shall be constructed, except that this prohibition shall not be construed to deny access to private lands or interests therein in the Scenic Area.
- 4F-011 Motorized travel in the Scenic Area shall be allowed on State Route 635 and Forest Development Road 51. Except as listed above, motorized travel shall not be permitted within or on the boundary of the Scenic Area except as necessary for administrative use in furtherance of the purposes of the George Washington National Forest Mount Pleasant Scenic Area Act of August 26, 1994 (PL 103-314).
- 4F-012 Any abandoned or closed roads are revegetated for resource protection.

### **Lands and Special Uses**

- 4F-013 This area is unsuitable for designation of wind energy development.

## 5A ADMINISTRATIVE SITES

### **Emphasis:**

Administrative sites include work centers, lookout towers, and Forest Service owned houses and offices. Sites are managed to serve/support resource programs and are maintained to protect capital investment.

### **Desired Condition:**

Provide administrative sites and facilities that effectively and safely serve the public and accommodate the workforce. Administrative sites are readily accessed by road, although some are accessed by trails. The facilities should have barrier-free access.

The landscape character could range from natural appearing to urban/cultural. These areas are classified as unsuited for timber production.

Forest Service offices and/or visitor centers provide educational and/or interpretive opportunities such as exhibits and displays, books, videos and brochures. Where feasible and appropriate, short hiking trails are provided in association with office visitor centers. Lookout towers provide opportunities for viewing scenery on a grand scale. Hunting and fishing are generally not allowed at administrative sites.

Some of these administrative sites lie within the foreground of the Appalachian National Scenic Trail. Within the foreground of the Appalachian Trail, management practices are designed to achieve the desired condition of this management prescription as well as protect the Appalachian Trail experience, strengthen the role of volunteers and volunteer organizations, provide opportunities for high quality outdoor recreation experiences, and provide for the conservation and enjoyment of the nationally significant scenic, historic, natural and cultural qualities of the land through which the Appalachian Trail passes.

### **Standards**

#### **Vegetation and Forest Health**

5A-001 Aggressively control forest insects, diseases, and non-native invasive plants using the most effective control method. Salvage is allowed.

#### **Appalachian National Scenic Trail**

5A-002 Within the foreground of the Appalachian Trail, all activities will be planned and carried out in cooperation with the appropriate Appalachian Trail management partner(s). See Management Area Prescription 4A for additional management direction applicable to this corridor.

#### **Scenery**

5A-003 Management activities are designed to meet or exceed the following Scenic Integrity Objectives:

Inventoried Scenic Class	1	2	3	4	5	6	7
Scenic Integrity Objectives	H	M	M	M	M	M	M

#### **Minerals**

5A-004 This area is not available for commercial or personal use of mineral materials. Administrative and free use of mineral materials is allowed.

## **5B DESIGNATED COMMUNICATION SITES**

### ***Emphasis:***

These designated sites contain special uses which serve a public benefit by providing a reliable communication network essential to local, regional, and national economies and security. These sites include ridgetop towers and other related facilities. These designated sites are managed to minimize adverse impacts on other resources. These sites are located at Signal Knob (Lee RD), Great North Mountain (Lee RD), Big Mountain (Lee RD), Elliot Knob (North River RD), White Grass Knob (North River RD), Reddish Knob (North River RD), North Mountain (James River RD), Fore Mountain (James River RD), Rocky Mountain (Pedlar RD), and Duncan Knob (Warm Springs RD). Approximately 13 acres are associated with this management prescription area.

### ***Desired Condition:***

Existing special use authorizations for communications continue within these designated sites. Each site is developed and utilized to its greatest potential in order to reduce the need to develop additional sites. Where possible, existing sites are expanded as needed rather than creating additional areas. All users' equipment are compatible with forest surroundings and others users' equipment and frequencies. New equipment should be as inconspicuous to the surrounding terrain as possible. Special use authorizations are issued.

Vegetation consists predominantly of low grasses and wildflowers with some native deciduous and evergreen shrubs. For the most part the areas consist of gently rolling terrain, some with exposed surface rock, rock outcrops, and meandering streams.

The protection of rare communities and species associates is provided, along with protection measures for population occurrences for threatened, endangered, sensitive, and locally rare species. This will provide a high likelihood that species within these associations will continue to persist on National Forest System lands.

The landscape character is cultural/urban. Scenery management techniques are used to mitigate adverse impacts. Utilizing existing and proposed towers to accommodate as many users as possible (within technical constraints) reduces tower clutter. These sites are non-forested, benefiting wildlife species, which favor grass, shrubs, old fields, and forest edges. These areas are managed to retain low growing vegetation which conforms to the safe operating requirements of the communication use and which reduce surface water runoff and erosion. Recreation is not emphasized or encouraged at these sites, although some of these sites are located within the foreground of the Appalachian National Scenic Trail.

## **5B - Designated Communication Sites**

### ***Standards***

#### **General**

5B-001 Communications towers no longer in use or determined to be obsolete are removed by the holder of the special use authorization within 18 months of cessation of use.

#### **Threatened, Endangered and Sensitive Species**

5B-002

#### **Vegetation and Forest Health**

5B-003 Aggressively control non-native, invasive plant species within these areas.

**Appalachian National Scenic Trail**

5B-004 Within the foreground of the Appalachian Trail, all activities will be planned and carried out in cooperation with the appropriate Appalachian Trail management partner(s). See Management Area Prescription 4A for additional management direction applicable to this corridor.

**Scenery**

5B-005 Management activities are designed to meet or exceed the following Scenic Integrity Objectives:

Inventoried Scenic Class	1	2	3	4	5	6	7
Scenic Integrity Objectives	M	M	L	L	L	L	L

## 5C DESIGNATED UTILITY CORRIDORS

### **Emphasis:**

These designated corridors contain special uses which serve a public benefit by providing a reliable supply of electricity, natural gas, or water essential to local, regional, and national economies. They include long linear features like high voltage electric transmission lines and buried pipelines for public drinking water or natural gas. These designated corridors serve uses that require at least a 50 feet wide right-of-way. Local distribution lines are not included in this prescription area, but rather are part of the prescription area in which they are physically located. Approximately 6,700 acres are allocated to this management prescription area across the Forest.

### **Desired Condition:**

Existing linear special use authorizations for transmission lines and pipelines for water and natural gas will continue within these designated corridors. Rights-of-way for uses within designated utility corridors are authorized by special use permit or easement. Where possible, existing corridors are expanded as needed rather than creating additional areas. Compatible multiple uses are encouraged, including co-location of communication uses on existing electric transmission towers.

Vegetation consists predominantly of low grasses, wildflowers with some native deciduous and evergreen shrubs, low-growing trees like dogwood and redbud, and young, sapling-sized trees.

The protection of rare communities and species associates is provided, along with the protection measures for population occurrences for threatened, endangered, sensitive, and locally rare species. This will provide a high likelihood that species within these associations will continue to persist on National Forest System lands.

Utility corridors are prime areas for viewing wildlife species that favor grass, shrubs, old fields, and forest edges. These areas are managed to retain low growing vegetation which conforms to the safe operating requirements of the utility and which reduces surface water runoff and erosion. Recreation use is generally hunting-related, although existing trail systems often cross these corridors. Some of these corridors are located within the foreground of the Appalachian National Scenic Trail. The landscape character could range from natural appearing to pastoral/cultural. Scenery management techniques are used to mitigate adverse impacts. These lands are predominately non-forest and therefore classified as unsuitable for timber production.

### **Standards**

#### **Vegetation and Forest Health**

5C-001 Aggressively control non-native, invasive plant species within these corridors.

#### **Appalachian National Scenic Trail**

5C-002 Within the foreground of the Appalachian Trail, all activities will be planned and carried out in cooperation with the appropriate Appalachian Trail management partner(s). See Management Prescription Area 4A for additional management direction applicable to this corridor.

#### **Scenery**

5C-003 Management activities are designed to meet or exceed the following Scenic Integrity Objectives:

Inventoried Scenic Class	1	2	3	4	5	6	7
Scenic Integrity Objectives	M	M	L	L	L	L	L

## **7A1 - HIGHLANDS SCENIC BYWAY**

The Highlands Scenic Byway is a 19.6-mile loop designated by the Chief of the Forest Service. It is located in Alleghany and Rockbridge Counties and includes segments of State Route 850, State Route 770 and National Forest System Road 447. 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 Drive 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 remnants of a once thriving mining community, including building foundations and a narrow gauge railroad grade.

There is a modest interpretive facility, trailhead and short loop trails along Simpson Creek. Other short interpretive trails are located along the Highlands Scenic Tour route. At least three overlooks with parking are located along the ridge of North Mountain.

### ***Emphasis:***

The Highlands Scenic Byway showcases the natural scenery, forest vegetation, cultural and geologic resources, and Forest Service management of these resources that were the basis for the scenic byway designation.

### ***Desired Condition:***

Vegetation is influenced both by natural processes and humans. Biological communities are maintained or improved to provide an attractive setting for visitors, while providing for the protection of rare communities and threatened, endangered, sensitive or locally rare species. Forest management activities maintain the natural characteristics that make the area scenic. Up to 10% of forested land may be in early-successional forest conditions created both naturally and purposefully to create visually diverse vegetation stages and provide opportunities to interpret management activities. Low intensity commercial timber harvest is appropriate to maintain the long-term goals of a diverse and vigorous forest.

This area is characterized by a predominance of mid- and late-successional forests with a high to intermediate tolerance to shade. Forest structure varies according to ecological factors, but largely consists of a mature overstory of hardwoods, occasionally mixed with pines, a fairly open midstory, and a well-developed herbaceous and shrubby understory. Even- and uneven-aged forest communities are managed throughout the area, along with continued development of small and medium patches of late-successional and old growth forest communities.

Road corridor improvements and facilities are evident changes to the natural environment. These components of a scenic byway and other man-made alterations fit well with the character of the surrounding landscape. Facilities include but are not limited to parking areas or pull-outs, trails or trailheads, buildings, viewing areas, and signs. Routes are signed to advise drivers of oversized vehicles and which routes are appropriate and safe for their use.

Interpretation of forest management activities has been a theme of the byway since its designation. Interpretive signs inform visitors of past and present management activities and their benefits, such as wildlife habitat improvements, stream structures, protection of cultural resources, and commercial timber harvesting.

The Tour is routed along paved and improved roads designed for motorcycles, cars, mini-vans and pick-up trucks. Turn-around areas are provided for oversized vehicles. The road is safe and the ride comfortable.

The potential for encounters with other Forest visitors is moderate to high, especially at byway facilities. There are no opportunities for people seeking solitude in remote locations. There is low risk and little need for visitors to rely on personal physical abilities or primitive outdoor recreation skills.

**Standards**

**Terrestrial and Aquatic Species**

7A1-001 Existing old fields, wildlife openings, and other habitat improvements for fish and wildlife may be present and maintained. Expansion of existing openings and/or creation of new openings may occur, when compatible with the scenic objectives.

**Vegetation and Forest Health**

7A1-002 In the foreground of the Byway, vegetation within the visual road corridor is managed to enhance landscape scenery and to ensure public safety.

7A1-003 Control insect and disease outbreaks, when necessary, to protect the scenic values, to reduce hazards to visitors, or for safety or legal reasons. Eradicate recently established non-native pests when possible. Favor the most effective control method.

**Timber Management**

7A1-004 In the foreground of the Byway, timber harvesting and other management practices may be employed to achieve the objectives of the Highlands Scenic Tour, such as interpretation of resource management including demonstrating harvest techniques. These practices meet a Scenic Integrity Objective of High and are designed to blend with the landscape.

7A1-005 In the middleground of the Byway, a variety of silvicultural practices that demonstrate and interpret forest management practices are employed to meet the desired future condition of this management area. All timber harvest methods are allowed provided they meet a Moderate Scenic Quality Objective. Ground-based timber harvesting is restricted to slopes less than 35 percent. Cable harvesting systems are not limited to slope.

7A1-006 Salvage is allowed for scenic rehabilitation, fuel reduction, and to capture the economic value of dead, dying and diseased trees.

**Scenery**

7A1-007 Management activities are designed to meet or exceed the following Scenic Integrity Objectives:

Inventoried Scenic Class	1	2	3	4	5	6	7
Scenic Integrity Objectives	H	M	M	M	M	M	M

**Minerals**

7A1-008 These areas are available for federal oil and gas leasing with controlled surface use to protect scenic values. Other Federal minerals, including mineral materials, may be available on a case-by-case basis after full consideration of effects on the scenic resources.

**Roads**

7A1-009 Other than the Tour route itself, only temporary or Traffic Service Level (TSL) D roads may be constructed, which are closed to public use.

**Lands and Special Uses**

- 7A1-010 These areas may be suitable for new utility structures, such as new transmission, gas, or water lines, only in the location with the least impacts to scenic integrity.
  
- 7A1-011 Issue non-recreational special-use authorizations only where there is a demonstrated public need or benefit and where no other reasonable alternatives exist.

## 7B SCENIC CORRIDORS

High quality scenery is provided in sensitive recreational and travelway settings. Examples include areas adjacent to "gateway" communities, areas around lakes, rivers, and "backdrop" areas viewed from major travelways and State-designated byways. The area visible during leaf-off for up to 1/2 mile from either side of the road typically defines the corridor. It also includes the visible middleground of the west face of Massanutten Mountain (a narrow strip) as seen from the Shenandoah Valley along Interstate 81. There are approximately 35,000 acres allocated to this management prescription area across the Forest. The scenic qualities of the landscape in these areas are maintained and their desired condition is described as follows:

**Table 4.7 Sensitive Recreational and Travelways**

Sensitive Recreational and Travelways	
Interstate 64	State Highway 311
	State Highway 55
Amtrak Railroad Line	State Highway 130
US Highway 60	State Highway 39
US Highway 250	State Highway 42
US Highway 33	State Highway 924
US Highway 211	State Highway 850
US Highway 220	State Highway 770
US Highway 501	State Highway 605
State Highway 259	State Highway 629 south of Douthat State Park
Interstate 81	Forest Development Road 447
State Highway 718	Forest Development Road 125
State Highway 606	Forest Development Road 274
State Highway 687	Monongahela NF Forest Development Road 106
State Highway 56	State Highway 629 north of Douthat State Park

### **Emphasis:**

The emphasis is on providing, through maintenance or restoration and design, high quality scenery in sensitive recreational and travelway settings. Examples include areas adjacent to "gateway" communities, areas around lakes, rivers, and "backdrop" areas viewed from State-designated byways and major travelways.

### **Desired Condition:**

These areas are characterized by high quality scenery in a setting conducive to a variety of recreational experiences. Human modifications are subordinate to the characteristic landscape. Landscape restoration and rehabilitation to meet high quality scenic conditions are a high priority. Coordination with nearby communities will help provide complementary management of adjoining lands.

The area provides exceptional opportunities for motorized recreation, especially scenic driving. The views along the corridors are natural appearing and include a variety of landscape characters, ranging from natural appearing to pastoral and historic/cultural, providing colorful accents and interesting textures, which change with the season. Visitors enjoy viewing wildlife in the occasional openings and meadows scattered throughout

the forest. Water, geographic features, and cultural landscapes such as hay fields, grazing livestock, and the occasional rustic cabin provide scenic diversions to the predominately forested landscape. Road corridor improvements and interpretive facilities are evident changes to the natural environment, but these man-made alterations fit well with the character of the surrounding landscape. Other management activities are not evident to the average visitor.

The prescription area is easily accessed. Maintaining a good road surface and providing informational signs for protection of the natural and cultural resources as well as the safety and comfort of visitors minimize impacts of visitors within the prescription area.

Hiking, mountain biking, and horse trails are present throughout the prescription area. Off-highway vehicle trails may be present, but new trails are not constructed except where desired to link existing trail systems. In addition to enjoying the scenery and using various trails, visitors may engage in photography, wildlife viewing, hunting, and fishing. Facilities are designed to harmonize with the desired landscape setting. Facilities might include roads, pullouts, overlooks, parking areas, trailheads, bulletin boards, interpretive kiosks, rail fences, signs, restrooms, and picnic sites. Trails through this area are well-marked and may include features for visitors with special access needs, loop systems, and/or interpretive programs.

The sights and sounds of other visitors and motorized vehicles may be present. The opportunity to encounter other visitors is high along roadways, at parking areas, pullouts, and overlooks, but may be moderate to low on trails away from congregated use areas. At points of highly developed recreational use, visitors take on low risk and are not challenged to rely on their own physical abilities and outdoor skills. Once away from the more developed areas, opportunities for solitude are available. In these more remote areas, visitors may take on some risk and be challenged to rely on their own personal physical abilities and primitive recreational skills such as bouldering, climbing, stream fording, and orienteering.

Vegetation is influenced both by natural processes and humans. Biological communities are maintained or improved to provide an attractive setting for visitors, while providing for the protection of rare communities and threatened, endangered, sensitive, and locally rare species. Forest management activities maintain the natural characteristics that make the area scenic. Up to 4% of forested land may be in early-successional forest conditions created both naturally and purposefully to create visually diverse vegetation stages compatible with scenic values. Low intensity commercial timber harvest is appropriate to maintain the long-term goals of a diverse and vigorous forest with sensitivity to dispersed recreation and scenic values. Relatively longer rotation ages and a lower percentage of early successional forest in these areas reflect a “low intensity” approach to vegetation management and the higher priority of recreation and scenic values. Timber harvesting operations focus on what is retained in the stand, not on wood fiber production. Timber harvest practices are visually subordinate to the surrounding landscape. In the foreground of these areas, management activities are rarely evident to the casual observer.

These areas are characterized by a predominance of mid- and late-successional forests with a high to intermediate tolerance to shade. Forest structure varies according to ecological factors, but largely consists of a mature overstory of hardwoods, occasionally mixed with pines, a fairly open midstory, and a well-developed herbaceous and shrubby understory. Understory vegetation includes a variety of native deciduous and evergreen flowering trees, shrubs and wildflowers. Even- and uneven-aged forest communities are managed throughout the area, along with continued development of medium and small patches of late successional to old growth forest communities.

Wildlife species associated with mid- to late-successional deciduous forest habitats are expected to inhabit this area. This management prescription also provides suitable habitat for eastern wild turkey. Wildlife viewing opportunities are maintained and expanded through cultivation, mowing, and burning of openings and pastoral areas.

## 7B - Scenic Corridors

### Standards

#### Terrestrial and Aquatic Species

- 7B-001 Wildlife and fisheries habitat improvements are allowed to enhance wildlife viewing, hunting, and fishing opportunities in accordance with scenic integrity objectives. Watchable wildlife species habitat improvements are encouraged.
- 7B-002 Existing old fields, pastoral areas, and wildlife openings may be present and maintained. Expansion of existing openings and/or creation of new openings may occur. Non-invasive non-natives are sometimes used when establishing food plants for wildlife, but native species are preferred. Some openings provide permanent shrub/sapling habitats as a result of longer maintenance cycles.

#### Rare Communities and Old Growth

7B-003

7B-004

#### Vegetation and Forest Health

- 7B-005 Forest structure is managed to favor flowering trees and shrubs.
- 7B-006 Control insect and disease outbreaks, when necessary, to protect the scenic values, to reduce hazards to visitors, or for safety or legal reasons. Eradicate recently established non-native pests when possible. Favor the most effective control method.
- 7B-007 Allow vegetation management activities to:
- ▶ Enhance or rehabilitate scenery, including:
    - Create aesthetically desired stand structure and species composition including a pleasing mosaic of tree species of various densities and stem sizes, park-like effects, and enhancement of fall color species;
    - Feature flowering trees, character trees, and shrub species;
    - Maintain open areas, old field habitats, pastoral settings, and vistas that enhance the scenic qualities of the corridor;
  - ▶ Maintain developed recreation facilities, including roads and trails;
  - ▶ Enhance both game and non-game wildlife habitat;
  - ▶ Improve threatened, endangered, sensitive, and locally rare species habitat;
  - ▶ Maintain rare communities and species dependent on disturbance;
  - ▶ Reduce fuel buildups;
  - ▶ Minimize impacts from insect or disease outbreaks and rehabilitate damaged areas;
  - ▶ Control non-native invasive vegetation; or
  - ▶ Provide for public health and safety.
- 7B-008\* Salvage of dead, dying and damaged trees using ground based or helicopter logging can occur in scenic corridors and viewsheds to provide for scenic rehabilitation and public safety.

#### Timber Management

7B-009\* Timber production is a suitable use in these areas. Some portions of the areas are identified as unsuitable for timber production due to the timber suitability analyses in Appendix C. Timber harvest practices are modified to recognize and enhance the aesthetic and recreational values of these lands.

7B-010 Group selection, individual tree selection, thinning, and shelterwood harvests are predominately used.

7B-011 Clearcutting may only be used to open up vistas, create spatial diversity along travelways, decrease straight line effect of cleared utility corridors, create watchable wildlife openings, for insect and disease suppression, or for scenic rehabilitation.

7B-012

**Wildland Fire Management**

7B-013 Vegetation management may be accomplished with wildfires and prescribed fire along with mechanical treatments as an appropriate method of reducing costs associated with these activities.

**Recreation**

7B-014 Interpretive services including trails, signs, viewing areas, self-guided programs, and buildings may be provided to enhance the understanding of, and appreciation for the natural environment, and cultural resources.

7B-015 Larger scale public use facilities, such as public information centers and administrative headquarters are allowed with structures properly landscaped.

7B-016

**Scenery**

7B-017 Management activities are designed to meet or exceed the following Scenic Integrity Objectives:

Inventoried Scenic Class	1	2	3	4	5	6	7
Scenic Integrity Objectives	H	H	M	M	M	M	M

7B-018 Short-term scenic integrity objectives of rehabilitation and enhancement may be used until scenic integrity objectives are achieved.

7B-019

**Minerals**

7B-020 These corridors and viewsheds are available for federal oil and gas leasing with controlled surface use to protect the scenic resources and values. Other Federal minerals may be available on a case-by-case basis after full consideration of effects on scenic resources and values.

7B-021 Permit mineral materials for commercial, personal, free, and administrative use purposes with conditions to protect the scenic resources and values.

7B-022\* Permit new borrow pits, provided they meet the scenic integrity objective. Rehabilitate or reclaim existing borrow pits that are currently not meeting the scenic integrity objective, after coordinating between resources to determine if a current need for borrow exists by the Forest Service or partner State or County agency

7B-022a Consider opportunities to provide interpretation of interesting geologic or fossil features along roadsides, including in borrow pits.

**Roads**

- 7B-023 Permit new access roads, provided they quickly enter and leave the seen area and do not parallel existing travelways.
- 7B-024 All roads, facilities, and signing are designed to blend in with surroundings.

**Lands and Special Uses**

- 7B-025 These areas are unsuitable for designation of new utility corridors, utility rights-of-way, or communication sites. Continue existing uses. Require necessary mitigation techniques, including screening, feathering, and other vegetation management techniques to mitigate the visual and other impacts of new or upgraded, utility corridors or communication sites.
- 7B-026 Allow agricultural special-use authorizations to maintain open and pastoral spaces.
- 7B-027 Authorize other special uses if consistent and compatible with the goals and objectives of this area.

## 7C ATV USE AREAS

With multiple competing recreational interests for national forest trails and limited land available to serve the many requests for additional trail miles of all types, the Forest serves this interest in a carefully planned and environmentally responsible manner. Challenging opportunities may exist for high-clearance and 4-wheel drive (4WD) vehicles on open roads. No cross-country travel occurs by Off-Highway Vehicles (OHV). Licensed OHV use may occur on any open forest road. There are approximately 10,000 acres allocated to this management prescription area on the Forest.

Three areas provide 64 miles of trails systems, including loop riding opportunities, for All-Terrain Vehicle (ATV) use as follows.

**Table 4.8 ATV areas on the GWNF**

Ranger District	ATV Area Name	Existing Route Mileage	Allowed Uses
North River	Rocky Run	10	ATVs, 4WD*, motorbikes, mountain bikes
Lee	Taskers Gap - Peters Mill Run	36	ATVs, 4WD, motorbikes, mountain bikes
Pedlar	South Pedlar	18	ATVs, motorbikes, mountain bikes

\*4WD trucks are allowed on only portions of the Rocky Run Trail.

### **Emphasis:**

Provide for motorized recreation opportunities in designated areas. These use areas and corridors contain routes designated specifically for licensed full size off-highway vehicle, ATV, and/or motorcycle users. Designated ATV use areas are managed to mitigate soil, water, and wildlife impacts. Facilities such as trailheads are provided to enhance the quality of the recreational experience and provide access to designated routes.

### **Desired Condition:**

ATV use areas are managed to provide a variety of motorized recreation opportunities on identified routes in natural appearing settings. Routes are maintained, improved, or expanded to meet local demands. Trail difficulty levels vary to accommodate a variety of desires and abilities. Users are adequately advised of trail difficulty levels and hazards. Support facilities, including trailheads, parking lots, restrooms, water access, and information boards, are well designed to meet the needs of the visitor. Use areas, route information, and regulations are provided to make the visitors' experience more enjoyable. These routes and areas are managed and monitored to absorb moderate to high levels of use while protecting soil, water, and air resource conditions.

Maintenance is performed to protect the routes and minimize effects to soil and water resources. Routes may be closed seasonally or during inclement weather to protect resources. Off-route and other unauthorized OHV use are not allowed. When such use occurs to a chronic degree, the routes are closed permanently or until the situation is corrected. New routes are considered for development only when there is a demonstrated need, interest, and a developed partnership with user groups.

ATV use areas provide primarily motorized recreation opportunities. While motorized recreation is emphasized on designated routes, other routes could be used for hiking, mountain biking, and horseback riding. Other

recreation opportunities such as hunting, fishing, and berry picking occur within the prescription area adjacent to the designated route corridors. Physical impacts are confined to the immediate trail or road profile and do not spread beyond. Though physical impacts from ATV use are confined to the immediate road or trail environment, sounds of motorized vehicles may be audible in other sections of the prescription area. Outdoor skills are of moderate or low importance for visitors except where knowledge of specialized activities such as driving ATVs is critical.

The landscape character is natural appearing with variations created by the recreational facilities. Recreationists enjoy traveling routes through a variety of landscapes. Along many of the routes, the views are restricted to the immediate foreground by vegetation and natural landform, but occasional openings reveal middleground or distant background vistas. Constructed routes blend well with the natural environment. Small created openings in the forest canopy may be apparent and visitors may see evidence of resource management activities; however, treatments blend with the natural landscape and vegetation diversity is enhanced over time. Constructed facilities are visually subordinate to the land.

A mix of forest successional stages will characterize use areas. Up to 16% of forested land may be in early-successional forest conditions; however, there are no early successional wildlife habitat objectives associated with this prescription. Lands within this prescription area are classified as suitable for timber production. Roads used or constructed to facilitate vegetation treatment are managed to provide non-conflicting access for both timber harvest and motorized recreation uses.

Wildlife species associated with early successional forest habitats and mixed landscapes are expected to inhabit these areas.

## **7C - ATV Use Areas**

### **Standards**

7C-001

7C-002

7C-003

### **Roads**

7C-004

7C-005

7C-006 Favor repair, reconstruction, and relocation of portions of routes favored by OHV users receiving unacceptable resource damage over closing the entire route. When chronic problems occur the entire route may need to be closed.

7C-007

### **ATV Use Area Standards**

#### **Water, Soil, and Air**

7C-008 The trail system within each ATV use area must have a monitoring plan.

#### **Terrestrial and Aquatic Species**

7C-009

7C-010 Existing old fields, pastoral areas, wildlife openings, and other wildlife habitat improvements may be present and maintained. Expansion of existing openings and/or creation of new openings may occur. Non-invasive non-natives are sometimes used when establishing food plants for wildlife, but native species are preferred. Some openings provide permanent shrub/sapling habitats as a result of longer maintenance cycles.

- 7C-011 Favor the retention of large (>20" d.b.h.<sup>2</sup>) standing snags and den trees when implementing silvicultural treatments.

### **Vegetation and Forest Health**

- 7C-012 The forest health strategy is to diminish the occurrence of pest problems by managing host-type conditions at low hazard. Use appropriate and practical suppression of pests, both non-native and native, with all available tools as the normal practice.
- 7C-013 Assure salvage is rapid, complete, and emphasizes marketing timber before its value decreases.

### **Timber Management**

- 7C-014\* Timber production is a suitable use in these areas. Some portions of the areas are identified as unsuitable for timber production due to the timber suitability analyses in Appendix C.
- 7C-015 Use even and uneven-aged silvicultural systems. Thinning and group selection may be employed to increase the structural diversity of the prescription area.
- 7C-016 Regeneration units range from 5 to 40 acres in size.
- 7C-017 Regeneration harvest areas are primarily coppice with reserves with 15- 25 square feet of basal area per acre left to ensure adequate sunlight for oak regeneration and two-aged silvicultural systems which leave 20-40 square feet of basal area per acre. In order to provide vertical diversity and future mast production, leave trees with a mean diameter of the codominant trees in the stand.
- 7C-018 Clearcut harvest systems occur when necessary to achieve specific wildlife habitat objectives. Thinning and group selection silvicultural systems are also employed to provide the structural diversity required by some species within this habitat association.

### **7C-019 Wildland Fire Management**

- 7C-020 Wildfire and prescribed fire are allowed to: create openings that stimulate soft mast production and browse; encourage oak sprouting; maintain, restore, and enhance native forest communities; ensure the continued presence of fire-dependent ecosystems; improve threatened, endangered, sensitive, and locally rare species habitat; and reduce fuel buildups. It is also used in conjunction with site preparation to accomplish silvicultural treatments.
- 7C-020a Implement needed restorative measures to travelways and trails after wildfires and prescribed burning. Firelines are obliterated as soon as practicable so they do not become unplanned trails.

### **Recreation**

#### **Trail Design**

- 7C-021 Design and locate the trail network to discourage illegal access to areas off the designated routes. Full advantage is taken of natural and man-made features to use as physical barriers to illegal use.
- 7C-022 Prioritize new route locations as follows: 1) Existing open or closed system roads, 2) Closed or obliterated roads, 3) New construction.
- 7C-023 Construct trail and road systems that include both single-track, narrow trails for the motorcycle and ATV user as well as roads that may be used for larger four-wheel drive vehicles and for timber removal.
- 7C-024 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, through trail design, layout, and signing.

- 7C-025 Minimize adverse effects on the land and resources, through trail design, layout, and management. Minimize damage to soil, watershed, vegetation, wildlife habitat, or other natural, cultural, and historical resources, and disturbance of wildlife on the public lands.
- 7C-026 Plan timber removal concurrently with possible route locations and opportunities.
- 7C-027 Obliterate decommissioned routes through restoration to their natural profile and revegetate to prevent continued use.

**Trail Management**

- 7C-028 Actively recruit volunteer organizations through the Adopt-A-Trail program to become involved in the long-term construction and maintenance of trail systems.
- 7C-029 Relocate or close routes 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.
- 7C-030 Relocate or close existing routes located in or adjacent to sensitive areas. Restore and revegetate unneeded old routes to their natural profile.
- 7C-031 Trail system designs with a series of loops are encouraged. This results in a more compact trail system that confines impacts and provides more options for users of varying skill levels

**Public Safety and Law Enforcement**

- 7C-032 Promote public safety and effective law enforcement.
- 7C-033 Provide sanitary facilities in ATV areas.
- 7C-034 Within ATV areas, provide public information that, as a minimum, includes maps showing open, closed, and restricted routes and areas, as well as the conditions of such use.

**Monitoring**

- 7C-035 The effects of vehicle use, noise levels, enforcement of restrictions and closures are closely monitored and evaluated.

**Scenery**

- 7C-036 Management activities are designed to meet or exceed the following Scenic Integrity Objectives:

Inventoried Scenic Class	1	2	3	4	5	6	7
Scenic Integrity Objectives	H	M	L	L	L	L	L

## **7D CONCENTRATED RECREATION ZONES**

Since its earliest days, the George Washington National Forest has offered facilities to the public for overnight and day use recreation activities. Under the New Deal of the 1930s and early 1940s, the Civilian Conservation Corps constructed multiple recreation sites across the National Forest. Several decades later, in 1962, the Outdoor Resources Review Commission's report to Congress and the President resulted in appropriated funds dedicated to providing more developed recreation facilities on public lands, including the George Washington NF. The 1987 President's Commission on Americans Outdoors report also recommended additional outdoor recreation opportunities and facilities be provided on public lands, although the funding for implementation was minimal compared to the earlier employment and recreation initiatives. There are approximately 660 acres allocated to this management prescription area.

Today, the George Washington National Forest offers the following developed recreation facilities:

- 20 family campgrounds, ranging from highly developed to primitive
- 8 group campgrounds, ranging from moderately developed to primitive
- 1 equestrian campground, primitive
- 8 swimming beaches
- 20 family picnic areas (not including the ones associated with the beaches)
- 11 group picnic areas with shelters
- 11 boating sites (ramps or boat launches on lakes, ponds, rivers)
- 4 shooting ranges
- 2 hang gliding sites
- 11 interpretive sites including a cabin, historic furnaces, and highly developed nature and history trails with interpretive signs
- 1 observation tower near parking; another observation tower 1.5 mile hike from parking area
- 21 developed trailhead parking areas.

### **Emphasis:**

Concentrated Recreation Zones are managed to provide the public with a variety of recreational opportunities in visually appealing and environmentally healthy settings. Developed recreation areas, concentrated use areas, and areas of high density dispersed recreation activity form Concentrated Recreation Zones. Facilities are provided to enhance the quality of the recreational experience and/or to mitigate damage to the affected ecosystems. These areas also serve as "gateways" to the wide diversity of recreation opportunities on the remainder of the forests.

### **Desired Condition:**

Visitors are able to choose from a wide variety of recreation opportunities in high quality, well maintained developed or dispersed settings. Campgrounds, picnic sites, boat ramps, river access sites, swimming beaches, interpretive sites, rifle ranges, trailheads and concentrated trail systems, are all examples of facilities found in Concentrated Recreation Zones. Other facilities consistent with the mission and complimentary to the ecosystem may also be provided. Constructed facilities are normally visually subordinate to the land and are constructed and maintained to a development scale appropriate to the recreational opportunity spectrum class. Facilities outside the developed recreation sites are provided to protect resources. Facilities that provide for user convenience, as well as for protection of resources, are constructed and/or maintained in the developed recreation areas. Outdoor skills are generally of low importance except where knowledge of specialized activities, (i.e. boating or horseback riding) is critical. Trails through this area are well-marked and may include features for visitors with special access needs, loop systems, and/or interpretive programs. Motorized access and their support facilities (i.e. roads, parking lots, or water access) are emphasized, although non-motorized experiences (i.e. walking and viewing nature) are also often present.

Use may be highly concentrated in some spaces or relatively uncrowded in other sections of Concentrated Recreation Zones. Recreation information and regulations are provided to make the visitors' experience more enjoyable. Interpretive programs may also be offered to enhance the visitor's educational and recreational experience. Access to fishing, hunting, and nature study are emphasized. Fish stocking is appropriate for Concentrated Recreation Zones.

The landscape character is a cultural enclave in natural appearing surroundings. A visually appealing landscape is emphasized by featuring special attractions like large rock outcroppings and waterfalls. Management activities maintain a healthy mid-successional forest of mixed hardwoods, hemlocks, and white pines. Understory vegetation includes a variety of native deciduous and evergreen flowering trees, shrubs and wildflowers. These areas may also include natural appearing open areas, balds, or pastoral landscapes. The scenic integrity objectives are in the upper values of high to moderate.

Some of these concentrated recreation areas are within the foreground of the Appalachian National Scenic Trail. Within the foreground of the Appalachian Trail, management practices are designed to achieve the desired condition of this management prescription as well as protect the Appalachian Trail experience, strengthen the role of volunteers and volunteer organizations, provide opportunities for high quality outdoor recreation experiences, and provide for the conservation and enjoyment of the nationally significant scenic, historic, natural and cultural qualities of the land through which the Appalachian Trail passes.

Vegetation is influenced to a large degree by humans, both through management for aesthetics and safety and through the high level of recreation use. Commercial timber harvest is appropriate to maintain the long-term goals of a diverse and vigorous forest emphasizing recreation, scenery, and visitor safety. Timber harvesting operations focus on what is retained in the forest, not on wood fiber production. Timber harvest is carefully timed and designed to be subtle. Integrated pest management is used to eradicate or suppress insects, diseases, and non-native, invasive vegetation.

Even and uneven-aged forest communities continue to develop throughout the area, along with medium and small patches of late successional to old growth forest communities. Up to four percent of forested land may be in early-successional forest conditions created both naturally and purposefully when compatible with the recreation and scenic objectives of the concentrated recreation area; however, no early successional habitat objectives are associated with this prescription. Wildlife viewing opportunities are maintained and expanded through livestock grazing, cultivation, mowing, and burning of openings and pastoral areas.

## **7D - Concentrated Recreation Zones**

### **Standards**

#### **Terrestrial and Aquatic Species**

- 7D-001 Wildlife and fish habitat improvements are allowed to enhance wildlife viewing and fishing opportunities in a manner complimentary to the area. Existing wildlife openings, pastoral areas, or old fields may be maintained. Expansion of existing openings and/or creation of new openings may occur. Maintenance methods may include cultivation, grazing, mowing, and burning. Use of native species will be emphasized.
- 7D-002 Improvements appear natural and remain subordinate to the landscape. Watchable wildlife species habitat improvements are encouraged.
- 7D-003 Hunting is prohibited within developed recreation sites.

#### **Vegetation and Forest Health**

- 7D-004 The forest health strategy is to prevent the occurrence of pest problems by managing host-type conditions at low hazard. Aggressive suppression of pests, both non-native and native, with all

available integrated pest management tools is normal practice. Favor the most effective control method. Salvage, cut and leave, and pruning are rapid and complete to protect the health and safety of visitors and facilities.

7D-005 Allow vegetation management activities to:

- ▶ Maintain developed and dispersed recreation facilities, including roads and trails;
- ▶ Maintain open areas, old field habitats, pastoral settings, and vistas that enhance the scenic qualities of the recreation area;
- ▶ Enhance or rehabilitate scenery, including:
  - Create aesthetically desired stand structure and species composition including a pleasing mosaic of tree species of various densities and stem sizes, park like effects, and enhancement of fall color species;
  - Feature flowering trees, character trees, and shrub species;
- ▶ Enhance both game and non-game wildlife habitat;
- ▶ Minimize impacts from insect or disease outbreaks and rehabilitate damaged areas;
- ▶ Reduce fuel buildups;
- ▶ Control non-native invasive vegetation; or
- ▶ Provide for public health and safety.

7D-006 Prepare vegetation management plans that emphasize damage prevention practices for developed recreation areas.

#### **Timber Management**

7D-007 These lands are classified as unsuitable for timber production. Vegetation management may be accomplished with commercial timber sales as an appropriate method of reducing costs associated with these activities.

7D-008 Clearcutting may only be used to open up vistas, create spatial diversity along travelways, decrease straight line effect of cleared utility corridors, create watchable wildlife openings, for insect and disease suppression, or for scenic rehabilitation.

#### **Wildland Fire Management**

7D-009 Wildfires are generally suppressed to minimize acreage burned due to high levels of public use and infrastructure investments in these areas.

7D-010 Prescribed fire is permitted for vegetation management to meet scenery, landscape character and hazard fuels reduction objectives. In developed recreation areas, evidence of firelines is rehabilitated as soon as practicable.

7D-010a Implement needed restorative measures to trails and travelways after wildland fire management. Firelines are rehabilitated as soon as practicable.

7D-011

#### **Recreation**

7D-012 Concentrated-use areas are inspected annually and high-risk conditions are corrected, identified to the public, or the area is closed.

7D-013 A site safety inspection is completed annually. Documented high-risk conditions are corrected prior to seasonal use in all developed recreation areas.

7D-014 Rest rooms are provided, are functional and in good repair.

- 7D-015 To keep humans free from unhealthy exposures to human waste, the waste is removed immediately upon discovery or notification.
- 7D-016 High-risk site conditions that develop during the use season are mitigated or the site is closed.
- 7D-017 These areas are unsuitable for designation of All-Terrain Vehicle use areas, although trailheads and connecting trails to adjacent ATV use areas are allowed.
- 7D-018

**Appalachian National Scenic Trail**

- 7D-019 Within the foreground of the Appalachian Trail, all activities will be planned and carried out in cooperation with the appropriate Appalachian Trail management partner(s). See Management Prescription Area 4A for additional management direction applicable to this corridor.

**Scenery**

- 7D-020 The landscape character is natural appearing, pastoral, or historic with variations created by the recreational facilities.
- 7D-021\* Management activities in concentrated recreation zones, except rifle ranges, are designed to meet or exceed the following Scenic Integrity Objectives:

Inventoried Scenic Class	1	2	3	4	5	6	7
Scenic Integrity Objectives	H	H	M	M	M	M	M

- 7D-022 Rifle ranges are managed to meet or exceed a Low scenic integrity objective across all scenic classes.

**Roads**

- 7D-023 All roads, facilities, and signing are designed to blend in with surroundings.
- 7D-024 The standard of road is commensurate with the recreation development level.
- 7D-025 Existing open public roads are maintained at or above current levels to provide for public access and safety.
- 7D-026

**Minerals**

- 7D-027 These areas are available for federal oil and gas leasing with controlled surface use to protect the recreation resources and values. Other Federal minerals may be available on a case-by-case basis after full consideration of effects on recreation and scenery.
- 7D-028 These areas are not available for mineral materials for commercial, personal, or free use purposes. Administrative use of mineral materials is allowed when: a) the materials are used within the recreation area itself; and b) use is necessary to protect the resources and values of the area.

**Lands and Special Uses**

- 7D-029\* These areas are unsuitable for new linear rights-of-way, communication sites or commercial wind generation, with the exception that local electrical distribution lines are allowed. Other special uses are authorized if consistent and compatible with the goals and objectives of these areas.

## 7E DISPERSED RECREATION AREAS

A number of developed recreation sites serve as gateways for dispersed recreation opportunities. In many cases, the developed recreation sites were developed to serve the needs of dispersed recreationists and protect resources. Interconnected trails and/or multiple loop trails provide opportunities for more concentrated dispersed recreation around or tangent to these recreation sites. The specific areas are as follows:

**Table 4.9 High density dispersed recreation areas**

<b>Ranger District</b>	<b>Dispersed Recreation Area</b>
North River	Brandywine
	Hone Quarry
	North River
	Shaws Fork
James River	Longdale
	Children's Forest
Lee	Trout Pond
	Elizabeth Furnace
Pedlar	Sherando
	Pedlar River
	Crabtree Meadows
	Shoe Creek
Warm Springs	Walton Tract
	Hidden Valley
	Lake Moomaw

### **Emphasis:**

These are areas of non-formal camping and recreational use in various locations across the forest. These areas receive moderate to high recreation use and are managed to provide a variety of dispersed recreation opportunities, improve the settings for outdoor recreation, and enhance visitor experiences, in a manner that protects and restores the health, diversity, and productivity of the land.

### **Desired Condition:**

These areas are characterized by easy access and are capable of sustaining a relatively high number of recreationists in a manner that protects the surrounding water, soil, vegetation, and wildlife. Visitors enjoy the natural appearing landscape character of these settings and are able to choose from a wide variety of well-maintained nature-based recreation opportunities. High quality forest roads and well-marked trails through these areas provide easy access. Some trails are maintained to be universally accessible and will serve families with children, seniors, urban visitors and people with special access needs. Management is designed to meet the growing demands for pleasure driving, day hiking, mountain biking, horseback riding, dispersed camping, backpacking, hunting, fishing, nature study, and nature photography and to showcase high quality scenery from travelways and concentrated use areas maintained through low intensity, planned vegetation management activities.

Trails through this area are well-marked and may include features for visitors with special access needs, loop systems, and/or interpretive programs. Facilities within these areas may include portable or permanent toilets, trash receptacles, fire grills, signs, or vehicle barriers; however, facilities are generally rare and are only provided for health and sanitation or to protect the area from resource damage.

The sights and sounds of other visitors and motorized vehicles are normally present. The opportunity to encounter other visitors is high along roadways, at parking areas, pullouts, and overlooks, but may be moderate to low on trails away from congregated use areas. Visitors are rarely challenged to rely on their own physical abilities and outdoor skills. Once away from open roads and trailheads, opportunities for solitude are available. In these more remote areas, visitors may take on some risk and be challenged to rely on their own personal physical abilities and primitive recreational skills such as bouldering, climbing, stream fording, and orienteering.

Roads are generally open to motorized activities. Non-motorized trails are maintained, improved, or expanded to meet local demands provided watershed and ecosystem health are not negatively affected. Limitations of use are implemented if any dispersed activity results in, or is expected to result in, negative effects to watershed or ecosystem health.

A mix of forest successional stages characterizes these areas. Infrequent pastoral and historic/cultural enclaves may also exist. From primary travelways and concentrated use areas, the valued character of these landscapes appears intact with no noticeable deviations.

Most of the area is unsuitable for timber production. However, Shaws Fork and portions of North River and Hidden Valley do contain areas suitable for timber production in order to provide a diversity of wildlife habitats for hunting and wildlife viewing. Timber harvesting operations focus on what is retained in the forest, not on wood fiber production. Timber harvest is carefully timed and designed to be subtle. Group selections, individual tree selections, thinnings, and shelterwood harvests are predominately used.

Wildlife species associated with mid- to late-successional deciduous forest habitats and mixed landscapes are expected to inhabit these areas. These areas provide excellent opportunities for wildlife viewing and hunting.

Prescribed fire, wildfire, integrated pest management and commercial timber harvest are appropriate to manage vegetation. Wildland fires are used to restore and maintain historic fire regimes. Wildlife viewing opportunities are maintained and expanded through cultivation, mowing, and burning of openings and pastoral areas.

## **7E - Dispersed Recreation Areas**

### **Standards**

#### **Terrestrial and Aquatic Species**

- 7E-001 Existing old fields, wildlife openings, and other habitat improvements for fish and wildlife may be present and maintained, and expansion of openings or creation of new permanent openings of this type may occur. Native species are emphasized when establishing food plants for wildlife. Some openings provide permanent shrub/sapling habitat as a result of longer maintenance cycles.
- 7E-002 Wildlife and fisheries habitat improvements are allowed to enhance wildlife viewing, hunting, and fishing opportunities in accordance with scenic integrity objectives. Watchable wildlife species habitat improvements are encouraged.

#### **Vegetation and Forest Health**

- 7E-003 Native forest insect and disease outbreaks are controlled only to prevent unacceptable damage to resources on adjacent land or to protect threatened, endangered, and sensitive species. Non-native, invasive insects and diseases may be eradicated or suppressed to prevent a loss of the old growth community. Favor biological control methods.

- 7E-004 Eradicate non-native invasive plants when the infestations are isolated. Use approved hand-applied pesticides, when necessary.
- 7E-005 Allow vegetation management activities to:
- Enhance or rehabilitate scenery;
  - Improve threatened, endangered, sensitive, and locally rare species habitat;
  - Maintain rare communities and species dependent on disturbance;
  - Reduce fuel buildups;
  - Restore, enhance, or mimic historic fire regimes;
  - Reduce insect and disease hazard;
  - Control non-native invasive vegetation.
  - Provide for public health and safety;
  - Meet trail construction and maintenance needs
  - Maintain, enhance, or restore the diversity and complexity of native vegetation;
  - Maintain recreation facilities, including roads and trails;

#### **Timber Management – Most Areas**

- 7E-006 These lands are classified as unsuitable for timber production. Vegetation management may be accomplished with commercial timber sales as an appropriate method of reducing costs associated with these activities.
- 7E-007 Salvage of dead and dying trees is only allowed if the recreation resource is not impaired by the salvage operation.

#### **Timber Management – Shaws Fork and Portions of North River and Hidden Valley Suitable for Timber Production**

- 7E-008 (7E2-007) Timber production is a suitable use in these areas where hunting recreation and watchable wildlife are emphasized. Some portions of the area are identified as unsuitable for timber production as described in Appendix C.
- 7E-009 (7E2-008) Even and uneven aged management systems are allowed, with an emphasis on group selection, thinning, two-aged and shelterwood treatments. Commercial thinning is commonly used to develop park-like stands and larger trees for aesthetic reasons.

#### **Wildland Fire Management**

- 7E-010 Vegetation management may be accomplished with wildfires and prescribed fire along with mechanical treatments as an appropriate method of reducing costs associated with these activities.
- 7E-011 Implement needed restorative measures to travelways and trails after wildfire and prescribed burning. Firelines are rehabilitated as soon as practicable.

#### **Recreation**

- 7E-012 New facilities such as trails, trailheads, toilets, and parking areas are allowed, but are considered on a case-by-case basis, commensurate with the public use of the area; existence of partnership(s) with user group(s) committed to providing long-term maintenance; air soil and water quality can be protected; and the new facility is deemed sustainable by the national forest.

**Scenery**

7E-013 Management activities are designed to meet or exceed the following Scenic Integrity Objectives:

Inventoried Scenic Class	1	2	3	4	5	6	7
Scenic Integrity Objectives	H	M	M	M	M	M	M

7E-014 Management activities are designed to meet or exceed a High Scenic Integrity Objective in semi-primitive non-motorized areas within this prescription area.

**Roads**

7E-015 Existing open public roads are maintained at or above current levels to provide for public access and safety.

7E-016 All roads, facilities, and signing are designed to blend in with surroundings.

## **7F BLUE RIDGE PARKWAY VISUAL CORRIDOR**

The Blue Ridge Parkway was established June 30, 1936 as a recreation-oriented motor road connecting Shenandoah National Park in Virginia with the Great Smoky Mountains National Park in North Carolina. The Parkway itself is administered by the USDI Park Service as an elongated park for public use and enjoyment through safe, uninterrupted, leisure motor travel, which provides for the conservation and interpretation of the natural and cultural resources of the Southern Appalachian Mountains. The Blue Ridge Parkway is known for spectacular mountain and valley vistas, quiet pastoral scenes, sparkling waterfalls, colorful wildflower and foliage displays, and its interpretation of mountain history and culture. There are approximately 4,400 acres in this management prescription area.

### ***Emphasis:***

The emphasis of this management prescription is to manage National Forest System lands that can be seen from the Blue Ridge Parkway in a manner which positively contributes to the Parkway visitor's experience along this motorized national treasure. Views from Parkway overlooks appear natural and retain High to Very High scenic integrity.

### ***Desired Condition:***

The Blue Ridge Parkway visual corridor provides exceptional opportunities for motorized recreation, including scenic driving. The views along the Parkway are natural appearing and include a variety of landscape characters, ranging from a continuous overstory canopy of large hardwoods and pines, to pastoral, cultural, rural, and suburban. Urban landscapes may be seen in the background from some scenic overlooks. In the foreground, understory vegetation and ground cover provide colorful accents and interesting textures for each season. Road corridor improvements and interpretive facilities are evident changes to the natural environment, but these man-made alterations fit well with the character of the surrounding landscape. Forest management activities are not evident to the average visitor.

Vegetation is influenced both by natural processes and humans. Low intensity commercial timber harvest is appropriate to maintain the long-term goals of a diverse and vigorous forest with sensitivity to dispersed recreation and scenic values. Relatively longer rotation ages and a lower percentage of early successional forest in these areas reflect a "low intensity" approach to vegetation management and the higher priority of protecting the values of the Blue Ridge Parkway. Structural diversity within mixed mesophytic and dry-to-mesic oak forest communities is enhanced through commercial and non-commercial vegetation management activities. Up to 4% of forested land may be in early-successional forest conditions created both naturally and purposefully. Timber harvesting operations focus on what is retained in the stand, not on wood fiber production. Timber harvest practices are modified to recognize the aesthetic and recreational values of these lands. Group selections, individual tree selections, thinnings, and light shelterwood harvests are predominately used. Clearcutting and shelterwood harvests leaving less than 35 square feet of basal area are only used within areas seldom seen from the Parkway and its overlooks.

Prescribed fire, wildlife habitat improvements, and integrated pest management are also appropriate management tools to manage vegetation. Wildfires are managed in cooperation with the Park Service using an appropriate management response to protect Parkway resources and visitor safety.

These areas are characterized by a predominance of mid- and late-successional forests with a high to intermediate tolerance to shade. Forest structure varies according to ecological factors, but largely consists of a mature overstory of hardwoods, occasionally mixed with pines, a fairly open midstory, and a well-developed herbaceous and shrubby understory. Understory vegetation includes a variety of native deciduous and evergreen flowering trees, shrubs and wildflowers. Even- and uneven-aged forest communities are managed throughout the area, along with continued development of medium and small patches of late successional to old growth forest communities. Up to 4% of forested land may be in early-successional forest conditions created both naturally and purposefully when compatible with the scenic objectives of the parkway corridor;

however, no early successional habitat objectives are associated with this prescription. Wildlife viewing opportunities are maintained and expanded through cultivation, mowing, and burning of openings and pastoral areas.

## **7F - Blue Ridge Parkway Visual Corridor**

### **Standards**

#### **General**

- 7F-001 All management activities within this corridor must be compatible with maintaining, rehabilitating, or enhancing views from the Blue Ridge Parkway.
- 7F-002 Short-term scenic integrity objectives of rehabilitation and enhancement may be used until scenic integrity objectives are achieved.

#### **Terrestrial and Aquatic Species**

- 7F-003 Wildlife and fisheries habitat improvements are allowed to enhance wildlife viewing, hunting, and fishing opportunities in accordance with scenic integrity objectives. Watchable wildlife species habitat improvements are encouraged.
- 7F-004 Existing old fields, pastoral areas, and wildlife openings may be present and maintained. Expansion of existing openings and/or creation of new openings may occur. Non-invasive non-natives are sometimes used when establishing food plants for wildlife, but native species are preferred. Some openings provide permanent shrub/sapling habitats as a result of longer maintenance cycles.
- 7F-005 Up to 4% of this prescription area may be in early successional habitat conditions.

#### **Rare Communities and Old Growth**

- 7F-006 7F-007

#### **Vegetation and Forest Health**

- 7F-008 Forest structure is managed to favor flowering trees and shrubs.
- 7F-009 Control insect and disease outbreaks, when necessary, to protect the scenic values, to reduce hazards to visitors, or for safety or legal reasons. Eradicate recently established non-native pests when possible. Favor the most effective control method.
- 7F-010 Allow vegetation management activities to:
- ▶ Maintain developed recreation facilities, including roads and trails;
  - ▶ Enhance or rehabilitate scenery, including:
    - Create aesthetically desired stand structure and species composition including a pleasing mosaic of tree species of various densities and stem sizes, park-like effects, and enhancement of fall color species;
    - Feature flowering trees, character trees, and shrub species;
  - ▶ Enhance both game and non-game wildlife habitat;
  - ▶ Improve threatened, endangered, sensitive, and locally rare species habitat;
  - ▶ Maintain rare communities and species dependent on disturbance;
  - ▶ Reduce fuel buildups;

- ▶ Reduce insect and disease hazard;
- ▶ Control non-native invasive vegetation; or
- ▶ Provide for public health and safety.

7F-011 Salvage is allowed for scenic rehabilitation, fuel reduction, and to capture the economic value of dead, dying and diseased trees.

**Timber Management**

7F-012 Areas seldom seen from the Blue Ridge Parkway and its associated overlooks are suitable for timber production.

7F-013 The remainder of this corridor is unsuitable for timber production. Vegetation management may be accomplished with commercial timber sales as an appropriate method of reducing costs associated with these activities.

7F-014 Use even and uneven-aged silvicultural systems. Uneven-aged forest management (e.g. group selection, individual tree selection) practices are designed to result in forest structure and composition consistent with late-successional deciduous forest habitats over the long-term.

7F-015 Regeneration units range from 2 to 25 acres in size, clustered on the landscape.

7F-016 Regeneration harvest areas are primarily coppice with reserves with 15- 25 square feet of basal area per acre left to ensure adequate sunlight for oak regeneration and two-aged silvicultural systems which leave 20-40 square feet of basal area per acre. In order to provide vertical diversity and future mast production, leave trees with a mean diameter of the codominant trees in the stand.

7F-017 Clearcut harvest systems occur when necessary to achieve specific wildlife habitat objectives. Thinning and group selection silvicultural systems are also employed to provide the structural diversity required by some species within this habitat association.

7F-018

**Wildland Fire Management**

7F-019 Wildfires are managed in cooperation with the National Park Service using a response that will protect Parkway resources and visitor safety.

7F-020 Prescribed fires and wildfire management are coordinated with the National Park Service to accomplish both Park Service and Forest Service management objectives in this corridor and adjacent management prescriptions.

**Recreation**

7F-021 Interpretive services including trails, signs, viewing areas, self-guided programs, and buildings are provided to enhance the understanding of, and appreciation for the natural environment, cultural resources, and the Parkway’s special features.

**Scenery**

7F-022 Management activities are designed to meet or exceed the following Scenic Integrity Objectives:

Inventoried Scenic Class	1	2	3	4	5	6	7
Scenic Integrity Objectives	H	H	M	M	M	M	M

**Range**

7F-023 Livestock grazing is not permitted.

**Minerals**

7F-024 The Blue Ridge Parkway corridor is available for federal oil and gas leasing with controlled surface use to protect the views and other values of the corridor. Other Federal minerals may be available on a case-by-case basis after full consideration of effects on scenic resources and other values.

7F-025 Permit mineral materials for commercial, personal, free, and administrative use purposes with conditions to protect the scenic resources and other values.

7F-026 Permit new borrow pits, provided they meet the scenic integrity objective. Rehabilitate or reclaim existing borrow pits that are currently not meeting the scenic integrity objective.

**Roads**

7F-027 Permit new access roads, provided they quickly enter and leave the seen area and do not parallel existing travelways.

7F-028 All roads, facilities, and signing are designed to blend in with surroundings.

7F-029 Density of open roads and/or motorized vehicle trails remains near the current level throughout the planning period, with only small increases or decreases.

**Lands and Special Uses**

7F-030\* These areas are unsuitable for designation of new utility corridors, utility rights-of-way, communication sites or wind generation. Continue existing uses. Require necessary mitigation techniques, including screening, feathering, and other vegetation management techniques to mitigate the visual and other impacts of upgraded, utility corridors, or communication sites.

7F-031 Authorize other special uses if consistent and compatible with the goals and objectives of this area.

## **7G PASTORAL LANDSCAPES**

These areas are associated with old farm lands. They are managed for a variety of wildlife species that need open canopies. They are also often important areas of dispersed recreation use, particularly those areas along major rivers.

### ***Emphasis:***

The emphasis is on providing, through maintenance or restoration, high quality, generally open landscapes with a pastoral landscape character. These landscapes provide important open grassland conditions for wildlife. These landscapes are frequently found in visually important travel corridors. Rangelands are also included in this area.

### ***Desired Condition:***

Visitors to these landscapes view and experience high quality pastoral scenery in a setting conducive to a variety of recreational experiences. These areas reflect a Rural Americana landscape character theme that represent remnants of a pleasant, peaceful, simple rural life. The backdrop for many of these areas is natural appearing forested landscapes or other similar privately owned pastoral landscapes. Human cultural modification is evident in the form of pastures, hedgerows, fencelines, farm paths, paved roads and dirt travelways, an occasional outbuilding, springhouse or barn all complementing the desirable pastoral landscape attributes of the rural setting. Grazing animals, such as cattle, horses, and sheep, are commonly observed. The predominantly grassy openings vary in size and shape as a result of traditional cultural land use patterns. Some exhibit straight-lined edges and others follow natural landforms and watercourses.

Recreation uses include pleasure driving, photography, watching wildlife, and participating in dispersed recreation such as picnicking, strolling, horseback riding, hunting, and fishing. These areas are typically accessible by motor vehicle and some may have small parking areas or pullouts to allow visitors to stop and walk through the area. These areas provide important habitat for early successional species and watchable wildlife habitats. Examples include songbirds, woodpeckers, hummingbirds, butterflies, deer, rabbits, foxes, turkeys, waterfowl, and squirrels.

The sights and sounds of other visitors and motorized vehicles are common, but are moderated in areas away from congregated use areas. Visitors take on low risk and are not challenged to rely on their own physical abilities and outdoor skills. Facilities, though minimal, are designed to fit the character of the specific sites where they are located. Facilities might include pullouts, small parking areas, trailheads, bulletin boards, interpretive signage, fence stiles, rail, and other fences. Trails, if present, are generally of a low development scale and do not have hardened surfaces.

Vegetation consists predominantly of low grasses and wildflowers with some native deciduous and evergreen shrubs interspersed with an occasional tree, hedgerow, or small woodlot. For the most part the areas are on gently rolling terrain, some with exposed surface rock, rock outcrops, and meandering streams.

Wildlife species associated with grassland and mixed habitats are expected to inhabit these areas. These areas provide excellent opportunities for wildlife viewing and hunting.

Sound range management practices help to maintain important old-field and grassland habitats and aesthetically pleasing pastoral settings. National forest grazing allotments demonstrate how innovative range management practices can maintain and restore vegetated riparian areas and stable streambanks within the range of natural variability. The national forest grazing program benefits local communities through assistance to small farmers.

## 7G - Pastoral Landscapes

### Standards

#### Vegetation and Forest Health

7G-001 These non-forest areas are unsuitable for timber management, although occasional tree removal or herbicide use may be necessary to manage forest encroachment, provide scenic views, improve visitor safety, or encourage the presence of certain watchable wildlife species.

7G-002 Eradicate non-native invasive plants.

7G-002a Allow vegetation management activities to:

- Maintain grasses, wildflowers, and shrubby vegetation;
- Enhance or rehabilitate scenery;
- Improve threatened, endangered, sensitive, and locally rare species habitat;
- Maintain rare communities and species dependent on disturbance;
- Reduce fuel buildups;
- Restore, enhance, or mimic historic fire regimes;
- Reduce insect and disease hazard;
- Control non-native invasive vegetation;
- Provide for public health and safety;
- Meet trail construction and maintenance needs

#### Timber Management

7G-002b These lands are classified as unsuitable for timber production. Vegetation management may be accomplished with commercial timber sales as an appropriate method of reducing costs associated with these activities.

7G-002c Salvage of dead and dying trees is allowed.

#### Wildland Fire Management

7G-003 Prescribed fire and wildfires are allowed and managed to maintain pastoral and associated forest landscapes.

#### Recreation

7G-004 New facilities such as trails, trailheads, toilets, and parking areas are allowed.

7G-005 These corridors are unsuitable for designation of new All-Terrain Vehicle routes or use areas.

#### Scenery

7G-006 Management activities are designed to meet or exceed the following Scenic Integrity Objectives:

Inventoried Scenic Class	1	2	3	4	5	6	7
Scenic Integrity Objectives	H	H	M	M	M	M	M

7G-007

**Range**

7G-008      Grazing is permitted in order to maintain a pastoral setting on areas historically grazed or on open cultivated areas.

7G-009      Grazing is not permitted without an Allotment Management Plan (AMP). AMPs are reviewed annually and revised when necessary.

7G-010      Stocking of range allotments will not exceed the carrying capacity.

**Roads**

7G-011      All roads, facilities, and signing are designed to blend in with surroundings.

**Lands and Special Uses**

7G-012      New land acquisitions containing old farms and pastoral areas are often assigned this management prescription, although there is no objective to acquire these types of landscapes.

## **SE4 INDIANA BAT HIBERNACULA PROTECTION AREAS**

These areas are located around caves that are known to contain the Indiana bat (*Myotis sodalis*), a federally listed endangered species that occurs in several locations across western Virginia, where it is near the eastern edge of its global range. There are approximately 14,400 acres allocated to this management prescription area.

These Indiana bat "hibernacula" areas are divided into two areas: the Primary Cave Protection Area and the Secondary Cave Protection Area. A primary cave protection area consists of a radius of no less than one half mile around each hibernaculum, defined by National Forest surface ownership and topography. This area is intended to protect the integrity of the cave and the immediate surrounding uplands where bats swarm and forage in the fall. A secondary cave protection area consists of a radius of approximately 1 1/2 miles around each primary cave protection area, defined by easily recognizable features on the ground. This area is designed to further maintain and enhance swarming, foraging, and roosting habitat. (Please note that the term "hibernacula" refers to caves in which bats hibernate and is used interchangeably with caves throughout this document. The singular form is hibernaculum.)

Indiana bats are known to be hibernating in four caves located on or near the George Washington National Forest. These prescription areas are intended to contribute to the goals of reversing population declines and reestablishing healthy populations of Indiana bats across the eastern United States. Management is based on the guidelines of the Indiana Bat Recovery Strategy for the George Washington and Jefferson National Forests (April, 1997).

Management activities are designed to: 1) protect hibernacula (caves in which the bats spend the winter); 2) maintain and enhance upland and riparian swarming and foraging areas; and 3) identify and protect summer roosting and maternity site habitat. The proposed conservation measures identified in the Indiana Bat Recovery Strategy for the protection and promotion of habitat for Indiana bats on the George Washington National Forest are applied at three scales:

- 1) A **primary cave protection area** as consisting of a radius of no less than one half mile around each hibernaculum, defined by national forest surface ownership and topography. This area is intended to protect the integrity of the cave and the immediate surrounding uplands where bats may swarm and forage in the fall.
- 2) A **secondary cave protection area** as consisting of a radius of approximately 1 ½ miles around each primary cave protection area, defined by easily recognizable features on the ground. This area is designed to further maintain and enhance swarming, foraging, and roosting habitat.
- 3) Because Indiana bats are known to travel over 200 miles between winter and summer habitats, standards are also applied to the George Washington National Forest as a whole. These can be found specifically in the Chapter 2-Forestwide Direction, Indiana Bat Management. These standards are designed to protect foraging areas; non-cave associated roosts and maternity sites, if any are discovered on the Forest.

### **SE4a - Indiana Bat Primary Cave Protection Areas**

#### **Emphasis:**

Within this prescription area, habitats are managed to maintain, restore, and enhance Indiana bat populations. Management of the primary cave protection area is focused on protecting the watershed of the cave along with maintaining and enhancing the surrounding environment where bats swarm, forage, and roost. Timber harvest is not appropriate within this prescription area. There are approximately 1,700 acres within primary cave protection areas.

**Desired Condition:**

This prescription area includes caves known to contain the Indiana bat, as well as the primary cave protection areas surrounding these hibernacula. Indiana bat hibernacula maintain winter temperatures between 39° and 50° F, and relative humidity above 54%. The hydrologic functioning, atmospheric conditions, and structural integrity of these caves are maintained. The ability of bats to enter, exit and move within hibernacula is unhampered. At a minimum, they are free from human disturbance from September 1 until June 1, when bats are hibernating and swarming. It is a long-term goal to acquire lands surrounding caves within the Forest's proclamation boundary that are known to contain the Indiana bat.

The landscapes of these areas predominately feature a structurally diverse older aged forest community with an open forested canopy. Grazed pastures are maintained and open woodlands may be restored through prescribed fire or wildfire management. These types of open habitats provide direct sunlight to roost trees and abundant Indiana bat prey. Cavity trees, cull trees, standing dead trees, storm and fire damaged live trees, and down logs are common throughout the area. Active roost trees are identified and protected from disturbance. At least six roost trees that retain slabs of exfoliating bark, greater than nine inches in diameter, with at least some daily exposure to sunlight are provided per acre. Indiana bat movement and flight paths are not restricted by dense understory vegetation. Indiana bat prey, such as flying insects, is abundant in terms of both numbers of individuals and diversity of species.

Natural processes eventually result in large patches of late successional to old growth forests. Activities to benefit bat habitat are limited to management of forest visitors, prescribed fire, wild fire, domestic livestock grazing, selected non-commercial tree cutting, and integrated pest management to control non-native invasive species like gypsy moth and autumn olive. Gaps may occur naturally or purposefully to increase sunlight exposure on selected roost trees. No activities which could lead to disruption of the cave environment or the taking of an Indiana bat occur in this area.

Insects and diseases play a natural role in shaping future plant and animal species composition and successional stages across these areas; however, non-native vegetation occurs only as transients and is not self-perpetuating. Biological or species-specific pesticide controls of gypsy moth, hemlock woolly adelgid, and other non-native species are permitted with full consideration of the effects on the Indiana bat, their habitat, and their prey. Timber harvest and pesticide controls may be implemented to aid in the study of effects of non-native pests on the Indiana bat.

Drinking water sources are available in created upland or ridgetop ponds. Ponds typically adjoin mature forest and most have a flight corridor, such as a pasture, road or wildlife linear strip, leading into them. Existing wildlife openings may be maintained. Aside from Indiana bats, wildlife species associated with mid- to late-successional deciduous forest habitats that are expected to inhabit this area include: hooded warbler, southern pigmy shrew; whip-poor-will; least weasel, downy woodpecker; eastern gray squirrel; and orchard oriole. Because the landscapes in which this prescription lies, including private lands, are over 70% forest cover, one could also expect to find area-sensitive mid- to late-successional forest species including: ovenbird, cerulean warbler, black-billed cuckoo, and Swainson's warbler. This management prescription also provides suitable habitat for eastern wild turkey and black bear.

Low-impact (dispersed) recreational uses of these prescription areas are compatible with the long-term conservation of the Indiana bat. These include hiking, hunting, backpacking, picnicking, photography, and wildlife study. Spelunking may be allowed when the bats are not using the caves for hibernation. Existing trails and roads are used for access to specified areas for these activities, although decommissioning of existing roads may occur. Off-highway vehicle use is prohibited. Educational materials describing the Indiana bat, its geographical distribution, its habitat, fragility, and conservation efforts are readily available to visitors of the area. The Indiana bat is actively protected against collection and killing, except for specified scientific purposes. Trail and road reconstruction, minor relocation, and new parking facilities are permitted. All activities are conducted with full consideration of effects on Indiana bat populations.

## **8E4b - Indiana Bat Secondary Cave Protection Areas**

### ***Emphasis:***

Within this prescription area, habitats are managed to maintain, restore, and enhance Indiana bat populations. The goals of the secondary cave protection area are to maintain and enhance swarming, roosting, and foraging habitat and to involve regularly scheduled vegetation management activities to maintain and enhance mid- to late-successional oak-hickory forests, open woodland habitats, and the trees that are most likely to develop and retain slabs of exfoliating bark. Commercial timber harvest is frequently the most practical and economical method of achieving these goals. There are approximately 13,700 acres within secondary cave protection areas.

### ***Desired Condition:***

Management of the secondary cave protection area is focused on maintaining and enhancing swarming, roosting, and foraging habitat. The landscapes of these areas feature a structurally diverse older aged forest community with a forested canopy. Where ecologically suitable, open pine-oak woodlands with a mature overstory and grassy understory are restored. Oak-hickory forests are managed to favor trees which develop and retain slabs of exfoliating bark including: shagbark hickory, bitternut hickory, white ash, red oak, chestnut oak, white oak, red maple, sugar maple, black gum, sycamore, black locust, and southern yellow pines. Cavity trees, cull trees, standing dead trees, storm and fire damaged live trees, and down logs are common throughout the area. These areas contribute small patches of late-successional to old growth forests to the forest-wide matrix. Active roost trees are identified and protected from disturbance. At least six roost trees that retain slabs of exfoliating bark, greater than nine inches in diameter, with at least some daily exposure to sunlight are provided per acre. Indiana bat movement and flight paths are not restricted by dense understory vegetation. Indiana bat prey, such as flying insects, is abundant in terms of both numbers of individuals and diversity of species.

Management activities designed to benefit bat habitat are used more frequently in the secondary cave protection area to maintain and enhance mid- to late-successional oak-hickory forests, open woodland habitats, and the trees that are most likely to develop and retain slabs of exfoliating bark. Additional trees with roosting potential are selected and sunlight conditions surrounding them are improved. Larger diameter snags with exfoliating bark are promoted and retained. Optimal foraging habitat with 50-70% canopy closure is provided to maximize both flying insect production and Indiana bat foraging success. Sixty percent of these areas are greater than 70 years of age, and 40% of the oak-hickory forest types are greater than 80 years of age. Structural diversity within mixed mesophytic and dry-to-mesic oak forest communities may be enhanced through commercial and non-commercial vegetation management activities.

Four to ten percent of the secondary cave protection area may be in early-successional forest conditions to provide flight corridors and foraging habitat, provided other habitat objectives are also met. Drinking water sources are available in created upland or ridgetop ponds. Ponds typically adjoin mature forest and most have a flight corridor, such as a road or wildlife linear strip, leading into them. Existing wildlife openings are maintained along with occasional creation of new openings. Wildlife species associated with mid- to late-successional deciduous forest habitats and mixed landscapes that are expected to inhabit these areas include: hooded warbler, southern pigmy shrew; whip-poor-will; least weasel, downy woodpecker; eastern gray squirrel; and orchard oriole. This management prescription also provides suitable habitat for ruffed grouse, eastern wild turkey and black bear. These areas provide excellent opportunities for wildlife viewing and hunting. Because the landscapes, in which this prescription lies, including private lands, are over 70% forest cover, one could also expect to find area-sensitive mid- to late-successional forest species including: ovenbird, cerulean warbler, black-billed cuckoo, and Swainson's warbler.

Non-native vegetation occurs only as transients and is not self-perpetuating. Biological or species-specific pesticide controls of gypsy moth, hemlock woolly adelgid, and other non-native species are permitted with full consideration of the effects on the Indiana bat, their habitat, and their prey. Timber harvest and pesticide controls may be implemented to aid in the study of effects of non-native pests on the Indiana bat.

Low-impact (dispersed) recreational uses of these prescription areas are compatible with the long-term conservation of the Indiana bat. These include hiking, hunting, backpacking, picnicking, photography, and wildlife study. Existing trails and roads are used for access to specified areas for these activities, although decommissioning of existing roads may occur. Off-highway vehicle use is prohibited. Educational materials describing the Indiana bat, its geographical distribution, its habitat, fragility, and conservation efforts are readily available to visitors of the area. The Indiana bat is actively protected against collection and killing, except for specified scientific purposes. Trail and road reconstruction, minor relocation, and new parking facilities are permitted. All activities are conducted with full consideration of effects on Indiana bat populations.

## **8E4 - Indiana Bat Hibernacula Protection Areas**

### **Standards**

Forestwide standards for protection and management of the Indiana bat are supplemented in this prescription area by the following standards specific to cave-associated habitats.

When not specifically stated otherwise, these standards refer to both the primary (8E4a) and secondary (8E4b) cave protection areas.

### **Primary Cave Protection Areas**

- 8E4-001 Each Indiana bat hibernaculum will have a primary buffer consisting of a radius of no less than one half mile around each hibernaculum, defined by national forest surface ownership and topography.
- 8E4-002\* No disturbance that will result in the potential taking of an Indiana bat will occur within this buffer.
- Commercial timber harvesting, road construction, use of the insecticide diflubenzuron, expansion or creation of permanent wildlife openings, and mineral exploration and development are prohibited.
  - Prescribed burning, tree cutting, road maintenance, and integrated pest management using biological or species-specific controls are evaluated during project level analysis to determine the direct, indirect, and cumulative effects on Indiana bats and the hibernacula.
- 8E4-003 All currently known hibernacula are gated. If additional hibernacula are found, the caves are gated, if necessary, to protect Indiana bats during the critical hibernation period.
- 8E4-004 All caves may be opened for public use during the summer months for recreational use from June 1 to September 1.

### **Secondary Cave Protection Areas**

- 8E4-005 A secondary buffer consisting of a radius of approximately 1½ miles around each primary cave protection area, defined by easily recognizable features on the ground, will have limited disturbance.
- 8E4-006 Within the secondary cave protection area, the following management activities can occur following evaluation to determine the direct, indirect, and cumulative effects on Indiana bats and the hibernacula:
- Regeneration timber sales;
  - Thinning;
  - Road construction or reconstruction;

- Prescribed burning;
- Trail construction or reconstruction;
- Special uses; and
- Biological or species-specific pesticide use.

#### **Active Maternity Site Protection**

8E4-007 If active maternity roost sites are identified on the Forest, they are protected with a 2-mile buffer defined by the maternity roost, alternate roost sites, and adjacent foraging areas. See Forestwide standards.

#### **Active Roost Tree Protection**

8E4-008 As active roost trees are identified on the Forest, they are protected with a ¼ mile buffer surrounding them. This protective buffer remains until such time they no longer serve as a roost (e.g. loss of exfoliating bark or cavities, blown down, or decay). See Forestwide standards.

#### **Terrestrial and Aquatic Species**

8E4-009 Management for other plant and animal species within the primary cave protection areas is evaluated during project level analysis to determine the direct, indirect, and cumulative effects on Indiana bats and the hibernacula.

8E4-010 Opportunities should be sought to include creation of drinking water sources for bats in project plans, where appropriate, in areas where no reliable sources of drinking water are available. Opportunities are considered when the creation is not detrimental to other wetland-dependent species (i.e., damage to natural springs and seeps).

8E4-011 Limit creation of early successional habitat to 10 percent of forested acres in the secondary cave protection area. Creation of early successional habitat in the primary cave protection area is prohibited.

8E4-012 Existing old fields, wildlife openings, and other habitat improvements for fish and wildlife may be present and maintained within both the primary and secondary cave protection areas, but no expansion of openings or creation of new permanent openings of this type occurs within the primary cave protection area. Native species are emphasized when establishing food plants for wildlife. Some openings provide permanent shrub/sapling habitat as a result of longer maintenance cycles.

8E4-013 Structural habitat improvements for fish and other aquatic species are allowed.

#### **Threatened, Endangered and Sensitive Species**

8E4-014 Management for other known populations of threatened, endangered, sensitive, and locally rare species within the primary cave protection areas are evaluated during project level analysis to determine the direct, indirect, and cumulative effects on Indiana bats and the hibernacula.

#### **Rare Communities and Old Growth**

8E4-015

8E4-016

#### **Vegetation and Forest Health**

8E4-017 Allow vegetation management activities within primary cave protection areas to:

- Promote trees that retain slabs of exfoliating bark;
- Promote large diameter roost trees with some daily exposure to sunlight;
- Thin dense midstories that restrict bat movement;

- Improve other threatened, endangered, sensitive, and locally rare species habitat;
- Maintain rare communities and species dependent on disturbance;
- Reduce fuel buildups;
- Restore historic fire regimes, particularly in pine and pine-oak woodlands;
- Reduce insect and disease hazard to oak-hickory forest communities;
- Control non-native invasive vegetation.
- Trail maintenance

8E4-018 Allow vegetation management activities within secondary cave protection areas to:

- Maintain oak-hickory forest communities; and restore pine and pine-oak woodlands;
- Promote trees that retain slabs of exfoliating bark;
- Promote large diameter roost trees with some daily exposure to sunlight;
- Thin dense midstories that restrict bat movement;
- Improve other threatened, endangered, sensitive, and locally rare species habitat;
- Maintain rare communities and species dependent on disturbance;
- Reduce fuel buildups;
- Restore, enhance, or mimic historic fire regimes;
- Reduce insect and disease hazard;
- Control non-native invasive vegetation;
- Salvage dead and dying trees as a result of insects, diseases, or other natural disturbance events;
- Provide up to 10% early successional habitat conditions.
- Trail maintenance

8E4-019 Strive for optimum roosting habitat of 16 or more Class 1 and/or Class 2 trees greater than 9 inches diameter at breast height (dbh) per acre, as averaged across the prescription area associated with each hibernaculum. Class 1 trees are those species which are most likely to have exfoliating bark either in life or after death, and which are most likely to retain it for several years after they die. Class 2 trees characteristically have exfoliating bark as well, but are considered to be of slightly lower quality than Class 1 trees.

Class 1 Trees	Class 2 Trees
<u>Carya cordiformis</u> (bitternut hickory)	<u>Acer rubrum</u> (red maple)
<u>Carya laciniosa</u> (shellbark hickory)	<u>Acer saccharum</u> (sugar maple)
<u>Carya ovata</u> (shagbark hickory)	<u>Aesculus octandra</u> (yellow buckeye)
<u>Fraxinus americana</u> (white ash)	<u>Betula lenta</u> (sweet birch)
<u>Fraxinus pennsylvanica</u> (green ash)	<u>Carya glabra</u> (pignut hickory)
<u>Quercus alba</u> (white oak)	<u>Carya</u> spp. (other hickories)
<u>Quercus prinus</u> (chestnut oak)	<u>Fagus grandifolia</u> (American beech)
<u>Quercus rubra</u> (red oak)	<u>Liriodendron tulipifera</u> (tulip poplar)
<u>Quercus stellata</u> (post oak)	<u>Nyssa sylvatica</u> (black gum)
<u>Ulmus rubra</u> (slippery elm)	<u>Platanus occidentalis</u> (sycamore)
	<u>Robinia pseudoacacia</u> (black locust)
	<u>Quercus coccinea</u> (scarlet oak)
	<u>Quercus velutina</u> (black oak)
	<u>Sassafras albidum</u> (sassafras)
	<u>Pinus echinata</u> (shortleaf pine)
	<u>Pinus virginiana</u> (Virginia pine)
	<u>Pinus rigida</u> (pitch pine)
	<u>Pinus pungens</u> (table mountain pine)

**Timber Management**

8E4-020 Primary cave protection areas are unsuitable for timber production. Commercial timber harvest is not allowed.

8E4-021\* Secondary cave protection areas are suitable for timber production. Some portions of the areas are identified as unsuitable for timber production due to the timber suitability analyses in Appendix C.

The remainder of the standards under this section refers only to the secondary cave protection area.

8E4-022 Clearcutting is prohibited.

8E4-023 In order to promote fall foraging and swarming areas, timber activities will leave all shagbark hickory trees and retain a minimum average of 6 snags or cavity trees (greater than or equal to 9 inches diameter at breast height, dbh) per acre as potential roost sites (except where they pose a safety hazard). For the group selection harvest method, all shagbark hickories are maintained (except where they pose a safety hazard) with no provision for minimum number of snags or cavity trees due to the small opening size.

8E4-024 Forested communities are maintained using either of two following criteria:

A minimum of 60% of the acreage of all Forest Types are maintained over 70 years of age; and a minimum of 40% acreage of FSVEG Forest Types 53 (white oak, red oak, hickory) and 56 (yellow poplar, white oak, red oak) are maintained at an age greater than 80 years old;

OR

When the above age criteria cannot be met, forest stands receiving even-aged regeneration harvesting are maintained with a minimum of 20 trees per acre in the 10-16 inch d.b.h. class and 15 trees per acre in the greater than 16 inch d.b.h. class, of which two trees per acre must be 20 inches d.b.h. or greater.

8E4-025 The 0 - 10 age class will not exceed 10% at any time (regardless which of the criteria above are used).

8E4-026 Timber marking and harvesting crews will receive training in the identification of potentially valuable roost trees.

8E4-027 Timber harvesting operations will be suspended from September 15 until November 15.

8E4-028

**Non-timber Forest Products**

8E4-029 Do not issue authorizations for the commercial or personal use of any forest products, including firewood.

**Wildland Fire Management**

8E4-030 Prescribed burning and wildfires are allowed to manage vegetation to maintain flight and foraging corridors in upland and riparian areas potentially used by bats in the summer.

**Recreation**

8E4-031 Maintain trails to the minimum standard necessary for protection of the soil, water, vegetation, visual quality, user safety, and long-term maintenance.

8E4-032 New trail construction is allowed only within the secondary cave protection area.

8E4-033

**Scenery**

8E4-034 Management activities are designed to meet or exceed the following Scenic Integrity Objectives:

Inventoried Scenic Class	1	2	3	4	5	6	7
Scenic Integrity Objectives	H	M	M	M	M	M	M

8E4-035 Management activities are designed to meet or exceed a High Scenic Integrity Objective in semi-primitive non-motorized areas within this prescription area.

**Range**

8E4-036

### **Minerals**

8E4-037 The primary cave protection areas are administratively unavailable for oil and gas and other Federal leasable minerals. Existing leases are not renewed upon expiration. These areas are not available for mineral materials for commercial, personal, or free use purposes. Administrative use of mineral materials is allowed when: a) the materials are used within the primary cave protection area itself; and b) use is necessary to protect Indiana bat habitat.

8E4-038 Within the secondary cave protection areas, oil and gas are allowed with a timing stipulation to protect Indiana bat habitat from September 15 to November 15. Other Federal minerals are allowed on a case-by-case basis after full consideration of effects on Indiana bat habitat. Permit mineral materials for commercial, personal, free, and administrative use purposes with conditions to protect Indiana bat habitat.

8E4-039

### **Roads**

8E4-040 Within the primary cave protection area, do not permit road construction, subject to valid existing rights or leases. Road reconstruction and minor relocation are permitted to benefit the Indiana bat and its habitat.

8E4-041 New construction and reconstruction are allowed in the secondary cave protection area.

8E4-042 Decommission roads when they are adversely affecting caves, their hydrology, or Indiana bat habitat security.

8E4-043

### **Lands and Special Uses**

8E4-044 Primary cave protection areas are unsuitable for new special uses, except for research and outfitter-guide operations. Phase out existing non-conforming uses.

8E4-045 Allow commercial use by outfitters and guides if compatible with preservation of the primary cave protection areas. Do not allow contest events such as foot races or horseback endurance events. Require outfitters and guides to use leave-no-trace techniques. Do not allow permanent camps.

8E4-046 Within secondary cave protection areas, new special use proposals are analyzed on a case-by-case basis to determine the potential effects on the Indiana bat.

8E4-047\* Both the primary and secondary cave protection areas are unavailable for wind energy development.

## **SE7 SHENANDOAH MOUNTAIN CREST**

Nearly the entire known range of the Cow Knob salamander (*Plethodon punctatus*) occurs on the George Washington National Forest. This area is located on the North River Ranger District along the crest of Shenandoah Mountain and Great North Mountain, largely above 3,000 feet elevation. Cow Knob salamanders typically reach their highest population densities in older age hardwood forests with abundant large down wood and rock. The U.S. Fish and Wildlife Service and the George Washington National Forest were the first federal agencies in the Nation to enter into a Conservation Agreement in 1994, under a multi-agency Memorandum of Understanding, designed to keep an at-risk species from needing to be listed under the Endangered Species Act. This Conservation Agreement, and accompanying Habitat Conservation Assessment, serves as the guide for management of the Cow Knob salamander. There are approximately 46,800 acres allocated to this management prescription area.

A variety of threatened, endangered, and sensitive species and unique natural communities occur on Shenandoah Mountain. This includes at least 15 species of plants and 13 species of animals plus their associated habitats. This area includes the following Virginia Division of Natural Heritage Conservation sites: Bother Knob/High Knob, Cow Knob, Laurel Run, Little Bald Knob, Maple Spring, Middle Mountain, Puffenbarger, Glade, Reddish Knob, and Skidmore.

### **Emphasis:**

This large area is managed to protect and/or enhance habitat for the Cow Knob salamander and for other outstanding natural biological values. The protection, maintenance and restoration of species, natural communities and ecological processes are the primary objective. Management of the biological resources coexists with dispersed recreation activities as well as other wildlife management activities that are compatible.

### **Desired Condition:**

Vegetation types influenced by the natural environmental and ecological processes dominate the landscape. 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.

Within this area, habitats are managed to maintain or enhance Cow Knob salamander populations and populations of other threatened, endangered, sensitive, and locally rare (TESLR) species, including the Shenandoah Mountain salamander. The landscape character of this area generally consists of a closed forest canopy of late-successional stages of mixed hardwoods on upper slopes combined with coves and riparian areas with eastern hemlock, tulip poplar, and rhododendron thickets. Within this matrix of mostly closed canopy forest is a mosaic of dry oak and yellow pine woodlands in a wide variety of successional stages and structural conditions, with a south to west aspect. Abundant ground cover in the form of rocks, down and decaying logs, and leaf litter are maintained and restored. Open grassy, shrubby areas and areas without vegetation, like roads, trails, and utility rights-of-way are minimized, except where desired for certain TESLR species and ecological systems. The landscape of the area retains a natural, forested appearance, and the valued character of the natural evolving landscape is intact with no noticeable deviations. The mix of forest communities varies by landtype association, including mixed mesophytic and mesic oak hickory forests dominated by red, white, chestnut, and black oaks, as well as tulip poplar, sugar and red maples, and hemlocks. The overstory is generally closed in forested conditions with minimal sunlight reaching the forest floor; however, naturally occurring brushy and herbaceous openings may occasionally be found. Natural processes eventually result in a large patch old growth forest matrix throughout much of the area. Cavity trees, standing dead trees, and down logs are common throughout the entire area as a result of natural mortality combined with gypsy moth killed trees. All forested blocks are interconnected by corridors which themselves have a continuous forest cover. Wildlife species associated with area-sensitive mid- to late-successional deciduous forest habitats are expected to inhabit this area. This habitat conservation area is unsuitable for

timber production and commercial timber harvest. Removal of non-native vegetation is considered appropriate. Sufficient canopy trees and large woody debris on the forest floor are maintained to reduce drying of subsurface soils. Biological pesticide controls of gypsy moth, hemlock woolly adelgid, and other detrimental species are permitted with full consideration of the effects on the salamanders, TESLR species, their microhabitat, and their prey.

The role of fire in maintaining some natural communities within this area is recognized as an important management tool. Management will include prescribed fire and wildfires on drier sites supporting rare plants and unique natural communities, including woodlands. Generally, fires occur predominately on drier sites where the Cow Knob salamander is absent. Therefore, fires on dry sites supporting rare plants and unique natural communities appear to be compatible with salamander conservation. Wildfires are managed under conditions to create or maintain habitat needed by TESLR species and rare communities where appropriate. Fire suppression efforts will use the least impact methods available to manage the fire. Low-impact (dispersed) recreational uses of the area are compatible with the long-term conservation of the Cow Knob salamander. These include hiking, hunting, backpacking, picnicking, photography, and wildlife study. Existing trails and roads are used for access to specified areas for these activities, although decommissioning of existing roads may occur. Mountain bike and horse riding occur only on designated roads and trails. The Cow Knob salamander is actively protected against collection and killing, except for specified scientific purposes. Limited access is provided through portions of the area on Forest Service and State roads with gravel, native, and occasionally paved surfaces. The opportunity to encounter other visitors is high along the roads and at parking areas, pull-outs, and overlooks. Forest visitors on foot, horse, or bicycles experience solitude in portions of this prescription area away from roads. Comfort, sanitation, and camping facilities on Forest Service lands are not provided, although primitive camping can be enjoyed throughout the area. During most of the year, occasional encounters with other forest visitors can be expected; however these encounters are more frequent during spring and fall hunting seasons. 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. Mountaintop vistas such as Reddish Knob Observation Site and Flagpole Knob provide sweeping views of the Shenandoah Valley.

Management activities limit negative impacts to Cow Knob salamander populations from permanent and long-term fragmentation, isolation, and edge effects (such as drying from increased insolation, impacts from edge predators, invasion of non-native invasive plants, and increased competition from other salamander species). No new permanent roads are constructed. Restoration of canopy and cover along temporary and decommissioned roads occurs quickly. Canopy closure along road rights-of-way is common. New trails may be constructed if no adverse effect on Cow Knob salamander populations will occur. Trail and road reconstruction, minor relocation, and new parking facilities are permitted. All activities are conducted with full consideration of effects on Cow Knob salamander populations.

## **Standards**

### **Terrestrial and Aquatic Species**

- 8E7-001 Watershed improvement projects are developed and implemented on areas where erosion is man-caused, but not normally undertaken in response to natural processes occurring on the area.
- 8E7-002 Maintenance or creation of wildlife habitat improvements is allowed except for those activities that would negatively impact Cow Knob salamander habitat.
- 8E7-003 The creation of new edge habitat for management of game species should be minimized, and is allowed as a wildlife management tool only in areas of habitat unsuitable for the Cow Knob salamander.
- 8E7-004 Vegetation may be manipulated for the management of the biological values identified as well as threatened, endangered, or sensitive species and their habitat.

### **Vegetation and Forest Health**

- 8E7-005 Native forest insect and disease outbreaks are controlled only to prevent unacceptable damage to resources on adjacent land or to protect threatened, endangered, sensitive, or locally rare species. Non-native, invasive insects and diseases may be eradicated or suppressed to prevent a loss of the special biological community. Favor biological control methods.
- 8E7-006 Control or eradicate non-native invasive plants using hand-applied herbicides, with Forest Supervisor approval, when necessary.
- 8E7-007 Control non-native invasive animals, insects, and diseases where they are causing negative effects to rare communities. Do not introduce non-native species in or near rare communities, unless it is a natural enemy of a non-native pest.

### **Timber Management**

- 8E7-008 These lands are classified as unsuitable for timber production.
- 8E7-009 Salvage of dead or dying trees using ground-based systems may occur for safety or scenic rehabilitation along open road systems.
- 8E7-010 Cutting of insect damaged, wind thrown, and fire killed trees which pose a safety or maintenance concern, may be conducted within 100 feet of the center of existing open roads. Non-commercial firewood cutting may be permitted with this same corridor, but only following salamander surveys indicating the area is not of significance to the Cow Knob salamander.

### **Non-timber Forest Products**

- 8E7-011 Do not permit the collection of non-timber forest products, except for scientific purposes as permitted by the Forest Supervisor.

### **Wildland Fire Management**

- 8E7-012 Vegetation management may be accomplished with wildland fire management.
- 8E7-013 New plow lines for containing prescribed burns in or near bogs and seasonal ponds are prohibited to avoid disrupting hydrology. Use existing roads, firelines, or streams to contain burns where possible. Favor construction of new firelines by using less intensive methods such as wetline, handline, and cutting back flashy fuels. Heavy mechanized equipment (e.g. bulldozers and tractors) may be used only if compatible with the values for which the management prescription area was created.

### **Recreation**

- 8E7-014 Modify recreation sites or trails to reduce or eliminate negative effects where recreational uses are negatively affecting threatened, endangered, sensitive, and locally rare species. New and improved recreational developments are designed to avoid adverse effects to threatened, endangered, sensitive, and locally rare species.
- 8E7-015 These areas are unsuitable for designation as All-Terrain Vehicle use areas.
- 8E7-016 Where appropriate, interpretive services (trails, signs, viewing areas) are provided to enhance visitors' understanding and appreciation of the area's special values.
- 8E7-017 Trails and other recreation facilities are located to minimize impacts occurring to the natural values of the established area.
- 8E7-018 Vistas and associated turn-outs may be maintained or increased where compatible with biological values.

**Scenery**

8E7-019 All management activities will meet or exceed a Scenic Integrity Objective of High.

**Minerals**

8E7-020 These areas are available for federal oil and gas leasing with controlled surface use to protect threatened, endangered, sensitive, and locally rare species. Other Federal minerals may be available on a case-by-case basis after full consideration of effects on threatened, endangered, sensitive, and locally rare species.

8E7-021 Permit mineral materials for commercial, personal, free, and administrative use purposes with conditions to protect threatened, endangered, sensitive, and locally rare species habitat.

8E7-022 Federal oil and gas leases exist in some of these areas. Roads, wells, and other necessary infrastructure associated with these leases are allowed. Existing lease stipulations are used to minimize disturbance to threatened, endangered, sensitive, and locally rare species habitat.

8E7-023 Private mineral rights exist in some of these areas. Roads, wells, and other necessary infrastructure associated with these rights are allowed. Requests for access to a non-Federal interest in lands pursuant to a reserved or outstanding right are recognized, and reasonable access is granted. Encourage such interests to minimize disturbance to threatened, endangered, sensitive, and locally rare species habitat.

**Roads**

8E7-024 Only permit road construction to access valid existing rights and mineral leases.

8E7-025 Existing roads may be maintained. Construction of new roads of any kind is not permitted in the management prescription area.

8E7-026 Reconstruction, minor relocation and construction of parking facilities are permitted where compatible with biological values.

**Lands and Special Uses**

8E7-027 These areas are unsuitable for designation of new utility corridors, utility rights-of-way, or communication sites unless there is an over-riding demonstrated public need or benefit. Existing uses may continue unless removal is necessary to protect threatened, endangered, sensitive, and locally rare species.

8E7-028 These areas are unsuitable for wind energy development.

8E7-029 These areas are unsuitable for designation of new utility corridors, utility rights-of-way, or communication sites. Existing uses may continue after evaluation of the impacts to the rare community.

8E7-030 Allow commercial use by outfitters and guides if compatible with preservation of the rare community values. Do not allow contest events such as foot races or horseback endurance events. Require outfitters and guides to use leave-no-trace techniques. Do not allow permanent camps.

8E7-031 Vegetation within existing corridors is maintained in a grass/shrub type by mowing, hand cutting or use of selective herbicide treatments.

## **11 RIPARIAN CORRIDORS – STREAMS, LAKES, WETLANDS, AND FLOODPLAINS**

Riparian Areas are functionally defined as areas with three-dimensional ecotones of interaction that include both terrestrial and aquatic ecosystems. They extend down into the groundwater, up above the canopy, outward across the floodplain, up the near-slopes that drain into the water, laterally into the terrestrial ecosystem, and along the watercourse at a variable width<sup>7</sup>. (For an operational definition of a riparian area based on soils, vegetation, and hydrologic characteristics see Appendix A.) A *riparian corridor* is a management prescription area designed to include much of the Riparian Area. Within the riparian corridor management prescription area, management practices are specified to maintain riparian functions and values. As a management prescription area, this includes corridors along all defined perennial and intermittent stream channels that show signs of scour, and around natural ponds, lakeshores, wetlands, springs, and seeps. (See Appendix A for a graphical representation of a riparian corridor.) There are approximately 53,560 acres of floodplains, wetlands, and riparian areas allocated to this management prescription area but because these acres are intricately embedded within other areas, they are not mapped on the Management Prescription Area map associated with this Forest Plan.

### ***Emphasis:***

Riparian corridors are managed to retain, restore, and/or enhance the inherent ecological processes and functions of the associated aquatic, riparian, and upland components within the corridor. Primarily, natural processes (floods, erosion, seasonal fluctuations, etc.) modify most of the areas within the riparian corridor. However, management activities may be used to provide terrestrial or aquatic habitat improvement, favor recovery of native vegetation, control insect infestation and disease, comply with legal requirements (e.g. Endangered Species Act, Clean Water Act), provide for public safety, and to meet other riparian functions and values. Silvicultural treatments including timber and vegetation removal may occur to restore and/or enhance riparian resources such as water, wildlife, and natural communities.

### ***Desired Condition:***

Riparian corridors reflect the physical structure, biological components, and ecological processes that sustain aquatic, riparian, and associated upland functions and values. The preferred management for riparian corridors is one that maintains, or moves toward, the restoration of processes that regulate the environmental and ecological components of riparian areas. However, due to the high value that these areas have for many uses, evidence of human activity (developed recreation areas, roads and trails, dams and reservoirs, and pastoral areas) may be present.

Riparian corridors are managed to emphasize the maintenance, restoration, and enhancement of habitat for species that depend on riparian resources for at least a part of their life-cycle. Management may also occur to maintain, restore, or enhance habitat for other species that benefit from riparian resources as long as the needs of species that depend on riparian resources for at least a part of their life-cycle are met.

The soils of riparian corridors have an organic layer (including litter, duff, and/or humus) of sufficient depth and composition to maintain the natural infiltration capacity, moisture regime, and productivity of the soil (recognizing that floods may periodically sweep some areas within the floodplain of soil and vegetation). Exposed mineral soil and soil compaction from human activity may be present but are dispersed and do not impair the productivity and fertility of the soil. Any human-caused disturbances or modifications that cause environmental degradation through concentrated runoff, soil erosion, or sediment transport to the channel or water body are promptly rehabilitated or mitigated to reduce or eliminate impacts.

Trees within the corridors are managed to provide sufficient amounts and sizes of woody debris to maintain habitat complexity and diversity for aquatic and riparian wildlife species. Recruitment of woody debris typically occurs naturally; however, woody debris may be purposefully introduced to enhance aquatic and terrestrial habitat. Both in-stream and terrestrial woody debris are regarded as essential and generally left undisturbed.

The riparian corridor functions as a travel-way for aquatic and terrestrial organisms. The corridor serves as a connector of habitats and populations allowing gene flow to occur, thus keeping populations genetically viable. Stream structures – such as bridges, culverts, and aquatic habitat improvement structures – may be evident in some streams and water bodies. With the exception of some dams, most structures do not decrease in-stream connectivity.

Suitable habitat is provided in the riparian corridor for riparian flora and fauna; especially threatened, endangered, sensitive (TES) and locally rare species. Vegetation (dead and alive) reflects the potential natural diversity of plant communities with appropriate horizontal and vertical structure needed to provide the shade, food, shelter, and microclimate characteristics for aquatic and terrestrial species. Rehabilitation of past and future impacts (both natural and human-caused) may be necessary to protect resource values and facilitate recovery of riparian structure and functions.

Vegetative communities within the riparian corridor are diverse and productive, providing for a rich variety of organisms and habitat types. The vegetative community within the riparian corridor is predominately forested; however, some native non-forested communities such as wet meadows and grass or shrub dominated plant communities may occur. The desired vegetative condition of non-forested communities is determined by site-specific analysis.

The forest contains multiple canopy layers, which provide diverse habitat structure, and thermal and protective cover for wildlife. Snags used by birds, bats, and other small animals are abundant. Dying and down trees are common, often in naturally occurring patches. Wet meadows, non-forest communities, and open forest canopies, created by flooding, wind damage, wildland fire, insect infestations, disease, restoration, and vegetation management may be seen.

Vegetation management activities are stratified into two sections of the riparian corridor. The core of the corridor is the area within 100 feet each side of perennial streams, lakes, ponds and wetlands and the area within 50 feet each side of intermittent streams. Within the core of the riparian corridor, vegetation management activities, including prescribed fire, may take place to maintain, restore, and/or enhance the diversity and complexity of native vegetation, rehabilitate both natural and human-caused disturbances, and provide habitat improvements for aquatic and riparian-associated wildlife species (including migratory birds), provide for visitor safety, or to accommodate appropriate recreational uses. Silvicultural treatments, including timber and vegetation removal, may occur within the riparian corridor, but the corridor will be classified as not suitable for timber production.

When slopes exceed ten percent, the riparian corridor is extended beyond the core area. Within this extended portion of the corridor vegetation management activities may take place to meet the objectives of the adjacent management prescription. However, these activities will be constrained by the standards in this riparian corridor prescription. Silvicultural treatments, including timber and vegetation removal, may occur within the extended section of the corridor. This extended section of the corridor can be classified as suitable for timber production if the adjacent management prescription is suitable. Prescribed fire can be used within the corridor to create or maintain the composition and vitality of fire-dependent vegetative communities.

The landscape character is natural evolving or natural appearing, but occasional enclaves of a rural landscape character may occur with pastoral settings and recreation developments (such as a swim beach at a campground). Livestock grazing may occur, but it is managed to minimize impacts on stream banks, water quality, and other riparian resources.

Both dispersed and developed recreation opportunities may be present within these corridors. Although recreational areas and facilities may create long-term impacts on riparian corridors, allowances are made in this prescription since a majority of recreation within the national forests occurs in or near water bodies. Hiking, dispersed camping, hunting, and fishing are typical activities available within the corridor. Visitors may encounter developed camping areas, boat launches and fishing piers. Current recreation areas and facilities are managed to minimize impacts on stream banks, shorelines, and water quality. New recreation facilities will be developed in accordance with Executive Orders 11988 and 11990 to minimize impacts on the riparian

resource. Environmental education and interpretation about the aquatic component and riparian corridor may be provided to increase awareness of the value of riparian resources.

### ***Desired Conditions for Aquatic Systems within the Riparian Corridor***

Streams are in dynamic equilibrium; that is, stream systems normally function within natural ranges of flow, sediment movement, temperature, and other variables. The geomorphic condition of some channels may reflect the process of long-term adjustment from historic watershed disturbances (e.g. past intensive farming or logging practices). The combination of geomorphic and hydrologic processes creates a diverse physical environment, which, in turn, fosters biological diversity. The physical integrity of aquatic systems, stream banks and substrate, including shorelines and other components of habitat is intact and stable. Where channel shape is modified (e.g. road crossings), the modification preserves channel stability and function.

The range of in-stream flows is maintained to support channel function, aquatic biota and wildlife habitat, floodplain function, and aesthetic values. Water uses and other modifications of flow regimes are evaluated in accordance with the national Forest Service in-stream flow strategy and site-specific analysis.

Water quality remains within a range that ensures survival, growth, reproduction, and migration of aquatic and riparian wildlife species; and contributes to the biological, physical, and chemical integrity of aquatic ecosystems. Water quality meets or exceeds State and Federal standards. Water quality (e.g. water temperature, sediment level, dissolved oxygen, and pH) will be improved where necessary to benefit aquatic communities.

Floodplains properly function as detention/retention storage areas for floodwaters, sources of organic matter to the water column, and habitat for aquatic and riparian species. Modification of the floodplain is infrequent but may be undertaken to protect human life and property or to meet other appropriate management goals (e.g. restoration). There may be evidence of some roads, trails, and recreation developments. Some wetland habitats may show signs of restoration.

The biological integrity of aquatic communities is maintained, restored, or enhanced. Aquatic species distributions are maintained or are expanded into previously occupied habitat. The amount, distribution, and characteristics of aquatic habitats for all life stages are present to maintain populations of indigenous and desired non-native species. Habitat conditions contribute to the recovery of species under the Endangered Species Act. Species composition, distribution, and relative abundance of organisms in managed habitats are comparable to reference streams of the same region. Some streams and lakes, however, may be stocked with non-native fish by the respective State natural resource agency.

Beavers are recognized as a keystone species that increase landscape heterogeneity and species diversity. Beaver ponds beneficially modify water flow rates, enhance groundwater recharge rates, raise water tables, sequester sediment, increase aquatic productivity, and modify water chemistry. Over time, beavers create a mosaic of habitats that are utilized by plants, amphibians, fish, insects, birds, and mammals that would not otherwise occur.

## **11 - Riparian Corridors – Streams, Lakes, Wetlands, and Floodplains**

### **Standards**

Standards refer to the entire riparian corridor (core and extended area) unless specified otherwise.

#### **General**

- 11-001 Any human caused disturbances or modifications that may concentrate runoff, erode the soil, or transport sediment to the channel or water body are rehabilitated or mitigated to reduce or eliminate impacts. Channel stability of streams is protected during management activities.
- 11-002 Motorized vehicles are restricted to designated crossings. Access for motorized vehicles may be allowed on a case-by-case basis, after site-specific analysis, outside of designated crossings where it can be shown to benefit riparian resources.
- 11-003 Management activities expose no more than 10 percent mineral soil within the project area riparian corridor.

#### **Aquatic Habitats within Streams and Rivers**

- 11-004 The removal of large woody debris (pieces greater than 4 feet long and 4 inches in diameter on the small end) is allowed if it otherwise poses a risk to water quality, degrades habitat for aquatic or riparian wildlife species, impedes water recreation (e.g. rafting) or poses a threat to private property or Forest Service infrastructure (e.g. bridges). The need for removal must be determined on a case-by-case basis.
- 11-005 The addition of large woody debris for stream habitat diversity will generally favor stream reaches with an average bank full width of less than 30 feet in Rosgen B channel types. Log length will generally be 50% greater than bank full width. In stream reaches where there may be potential debris impacts to downstream private or public infrastructure (e.g. bridges) or to water-based recreation (e.g. rafting), the active recruitment (placement) of large woody debris will be limited in quantity and scope.
- 11-006 Stocking of new non-native species and stocking of previously unstocked areas is not allowed where it will negatively impact native aquatic species or communities. Prior to any stocking, national forests coordinate with the appropriate State and Federal agencies to ensure that populations and habitats of native species are maintained.
- 11-007 Restoration of chemical integrity of aquatic ecosystems (from impacts such as acid deposition and acid mine drainage) is allowed on a site-specific basis for protection or for restoration of aquatic species.
- 11-008 Instances where the flow regime is modified for other purposes (such as reservoir releases for recreational sports or hydroelectric demand), evaluate instream flow needs in accordance with the national strategy for water rights and instream flows.
- 11-009 In-stream habitat improvements, and stream-connected disturbances will be designed and implemented after consideration of the life-cycle requirements of at risk species or species of management concern.
- 11-009a In cold water stream habitats, activities that unfavorably affect trout spawning should be avoided from October 1 to April 1 in brook trout and brown trout streams and/or March 15 to May 15 in rainbow trout streams. Any necessary in-stream disturbance activities within these time limits must have consultation with state and Forest biologists.
- 11-009b When working in any waterbody, especially those known to have aquatic nuisance species, remove any visible mud, plants, fish or animals before transporting equipment, eliminate water from equipment before transporting, clean and dry anything that came in contact with water (boats, trailers, equipment, clothing, dogs, etc.), and never release plants, fish or animals into a body of water unless they came out of that body of water.

- 11-009c When working in a stream with *Didymosphenia geminata*, soak and scrub all gear for at least one minute in a 2% solution of household bleach, or if cleaning is not practical, dry equipment in the sun for at least 48 hours before using it in another stream. Fish, plants, rocks, and vegetation should not be moved between waterways.

### Terrestrial Species

- 11-010 Existing permanent wildlife openings may be maintained within the riparian corridor. However, permanent wildlife openings identified as causing environmental degradation through concentrated runoff, soil erosion, sediment transport to the channel or water body are mitigated or closed and restored. New permanent wildlife openings within the riparian corridor are permitted where needed to provide habitat for riparian species, or threatened, endangered, sensitive, and locally rare species.
- 11-011 Use no-till mechanical cultivation methods for maintenance of wildlife openings.
- 11-012\* Small patches of early successional forest may be created within the riparian corridor to provide shrubby areas with low gradient and moist soils to provide habitat for woodcock and meet a habitat need for ruffed grouse and other high priority species. This can be done through cut and leave, girdling trees to create snags, or thinning through timber harvest leaving at least 30 square feet basal area per acre; as determined by site-specific analysis. Trees within 30 feet of the waterbody must be left to maintain bank and floodplain stability.

### Rare Communities

- 11-013 Management actions that may negatively alter the hydrologic conditions of wetland rare communities are prohibited. Such actions may include livestock grazing and construction of roads, plowed or bladed firelines, and impoundments in or near these communities. Exceptions may be made for actions designed to control undesirable impacts caused by beavers, or where needed to control fires to provide for public and employee safety and to protect adjacent private land resources. Beaver impoundments may be removed if they are negatively affecting federally listed species.
- 11-014 Introducing fish into wetland rare communities is prohibited.
- 11-015

### Vegetation and Forest Health

- 11-016 Insect and disease control measures will be determined on the basis of risk to adjacent resources, long-term sustainability, and appropriate needs for the function and condition of the riparian area. When cutting is an appropriate control tactic, cut and leave is the preferred method for control and suppression of insects and disease in the core of the riparian corridor. Cut and remove is permitted in the extended area beyond the core. Other control measures may be used when a condition poses a risk to stream stability, degrades water quality, adversely affects habitat for aquatic or riparian species, poses a threat to public safety or facilities, or when “cut and leave” is not effective.
- 11-017 Tree removals from the core of the riparian corridor may only take place if needed to:
- Enhance the recovery of the diversity and complexity of vegetation native to the site;
  - Rehabilitate both natural and human-caused disturbances;
  - Provide habitat improvements for aquatic or riparian species, or threatened, endangered, sensitive, and locally rare species;
  - Reduce fuel buildup;
  - Provide for public safety;
  - For approved facility construction/renovation; or

- As allowed in standards 11-012 and 11-022.

11-018 Tree removals from the extended area beyond the core of the riparian corridor may take place to meet the objectives of the adjacent management prescription.

### **Timber Management**

11-019 Lands in the core of the riparian corridor are classified as not suitable for timber production. Vegetation management may be accomplished with commercial timber sales when that is the most practical or economically efficient method.

11-020 Lands in the extended area beyond the core of the riparian corridor may be suitable for timber production when the adjacent management prescription is also suitable.

11-021 When timber harvest occurs in the extended area beyond the core of the riparian corridor for purposes of meeting the objectives of the adjacent management prescription, then vehicles will be excluded from the extended area.

11-022 Corridors for cable logging in areas adjacent to the riparian corridor may cross the riparian corridor. Crossing will be at as near a right angle as possible, with full suspension preferred.

11-023 In cable logging, when full suspension is not possible, partial suspension is allowed with armoring when yarding logs across perennial and intermittent streams.

### **Non-timber Forest Products**

11-024 Do not permit commercial collection of botanical products in the riparian corridor if it would adversely affect the functions and values of the riparian area.

11-025 Permitted firewood cutting within the riparian corridor must take into consideration large woody debris needs. Ranger Districts will identify areas where firewood cutting is not permitted due to large woody debris concerns.

### **Wildland Fire Management**

11-026\* Avoid aerial application of retardant or foam within 300 feet of waterways. Fire retardants should not be applied directly over open water.

11-027 Use existing fire barriers; such as streams, roads, trails, etc. for control lines where possible.

11-028 When necessary to construct fire lines with heavy equipment (e.g. bulldozers) that cross riparian areas and streams, construct turnouts that will allow runoff to be dispersed and infiltrated into the soil before reaching the stream, and then cross stream at right angle. These fire lines should be stabilized and/or revegetated as soon as possible after the fire is controlled.

11-029 Plan prescribed fires to use existing barriers, e.g. streams, lakes, wetlands, roads, and trails, to reduce the need for fire line construction.

11-030 Construction of firelines with heavy mechanized equipment (e.g. bulldozers) in riparian corridors is prohibited. Hand lines, wet lines, or black lines are used to create firelines within the riparian corridor to minimize soil disturbance. Water diversions are used to keep sediment out of streams. Firelines are not constructed in stream channels, but streams may be used as firelines.

### **Recreation**

11-031 New trails will normally be located outside of the riparian corridor except at designated crossings or where the trail location requires some encroachment (e.g. to accommodate stream crossings in steep terrain, etc.), or to manage access to water bodies.

11-032 New motorized trails are prohibited within the riparian corridor except at designated crossings or where the trail location requires some encroachment; for example, to accommodate steep terrain. When existing off-highway vehicle trails within riparian corridor are causing unacceptable resource damage, appropriate mitigation measures (which may include OHV trail closure) will be implemented.

- 11-033 Motorized and non-motorized trail reconstruction and relocation within the riparian corridor are allowed to reduce impacts to riparian and aquatic resources.
- 11-034 Proposed recreation facilities will be located outside of the riparian corridor or 100-year floodplain (Executive Order 11988) and wetlands (Executive Order 11990) unless no practicable alternative location exists. Where future facilities cannot be located out of the 100-year floodplain, structural mitigation and best management practices will be used. Trails, campsites, and other recreational developments are located, constructed, and maintained to minimize impacts to channel banks and to prevent other resource damage. When existing facilities are causing unacceptable resource damage, appropriate mitigation measures will be implemented. Soils are stabilized on eroding trails and recreational sites.
- 11-035 Where a riparian area is identified as vulnerable to environmental impacts, camping trailers and vehicles should not be allowed within 50 feet of perennial streams or lakes, except at designated areas.
- 11-036 Overnight tethering or corralling of horses or other livestock is not allowed within 50 feet of stream courses or lakes. Existing corral sites are maintained to limit impacts to water quality and riparian corridors until alternative sites are developed.

#### **Scenery**

- 11-037 Management activities are designed to meet or exceed a High Scenic Integrity Objectives.

#### **Range**

- 11-038 Where grazing is currently allowed and under a permit, grazing is controlled and mitigated to restore, maintain or enhance the integrity of stream channels and banks and prevent unacceptable resource damage. Reauthorizing grazing in riparian corridors within these existing allotments may occur if continued grazing would have no unacceptable resource damage on riparian resources. New grazing allotments or new permits for inactive allotments will exclude the riparian corridor.
- 11-039 Where authorized by permit, livestock watering areas, stream crossings, and stream banks are managed to maintain bank stability. Designated entry points, crossings, and watering points are located, sized, and maintained to minimize the impact to riparian vegetation and function.
- 11-040 Feeding troughs and salt and mineral blocks are not allowed inside the riparian corridor unless the entire pasture is within the riparian corridor, in which case they are located as far away from streams as possible. Watering troughs are appropriately located to protect the streams.

#### **Minerals**

- 11-041 The riparian corridors are available for federal oil and gas leasing with a controlled surface use stipulation to protect riparian resources and values. Other Federal minerals may be available on a case-by-case basis after full consideration of effects on the riparian corridor.
- 11-042 Federal oil and gas leases exist within these corridors. Roads, wells, and other necessary infrastructure associated with these leases are allowed. Existing lease stipulations are used to protect the riparian corridor.
- 11-043 These corridors are not available for commercial or personal mineral materials. Administrative and free use of mineral materials is allowed only to restore riparian areas and aquatic habitat, control erosion and sedimentation, and repair flood damage.
- 11-044 Private mineral rights exist in some riparian corridors across the Forest. Roads, wells, and other necessary infrastructure associated with these rights are allowed. Requests for access to a non-Federal interest in lands pursuant to a reserved or outstanding right are recognized, and reasonable access is granted. Encourage such interests to minimize disturbance of riparian resources and values.

### Roads

- 11-045 New roads are located outside the riparian corridor except at designated crossings or where the road location requires some encroachment; for example to accommodate steep terrain, or are allowed within the corridor if the road will cause more resource damage if it were located outside the corridor. When existing roads within riparian corridor are causing unacceptable resource damage, appropriate mitigation measures will be implemented.
- 11-046 In-stream use of heavy equipment or other in-stream disturbance activities is limited to the amount of time necessary for completion of the project. Construction of crossings is completed on all streams as soon as possible after work has started on the crossing. Permanent and temporary roads on either side of stream crossings within the riparian corridor are graveled.
- 11-047 When constructing roads, each road segment will be stabilized prior to starting another segment. Stream crossings will be stabilized before road construction proceeds beyond the crossing.
- 11-048 To minimize the length of streamside disturbance, ensure that approach sections are aligned with the stream channel at as near a right angle as possible. Locate riparian corridor crossings to minimize the amount of fill material needed and minimize channel impacts. Generally, permanent structures or temporary bridges on permanent abutments are provided when developing new crossings on perennial streams. Permanent structures, temporary bridges or hardened fords are used when crossing intermittent streams.
- 11-049 Design structures (culverts, bridges, etc.) to accommodate storm flows expected to occur while the structures will be in place. Use scientifically accepted methods for calculating expected storm flows.
- 11-050 Design crossings so stream flow does not pond above the structure during normal flows in order to reduce sediment deposition immediately above the crossing and maintain the channel's ability to safely pass high flows.
- 11-051 Design the crossing so that stream flow will not be diverted along the road if the structure fails, plugs with debris, or is over-topped.
- 11-052 If culverts are removed, stream banks and channels must be restored to a natural size and shape. All disturbed soil must be stabilized.
- 11-053 Fords associated with new road construction are not used in perennial streams without site-specific environmental analysis. Establish fords only under conditions that will not cause significant streambank erosion. Erosion stone or larger rock is used to increase load bearing strength at the water/land interface.
- 11-054 All new stream crossings will be constructed to allow the passage of aquatic organisms, and maintain natural flow regime. Exceptions may be allowed in order to prevent the upstream migration of undesired species.

### Lands and Special Uses

- 11-055 Riparian corridors are generally unsuitable for new human created stream channel impoundments, but may be considered on a project specific basis, consistent with appropriate Federal and state regulations. Impoundments will generally be designed to allow complete draining, with minimum flows, cold-water releases, and re-aeration in trout waters and other specific waters when needed. Downstream catch basins and fish ladders are constructed for fish salvage/passage, if necessary. New human-constructed impoundments are unsuitable on streams where federally listed species will be negatively affected.

### Other Ground Disturbing Activities

- 11-056 For activities not already covered in the above standards, ground disturbing activities are allowed within the corridor if the activity will cause more resource damage if it were located outside the corridor, on a case-by-case basis following site-specific analysis. Any activity allowed under these conditions is minimized and effective sediment trapping structures such as silt fences, brush

barriers, straw bale barriers, gravelling, etc., are required. Sediment control, prior to, or simultaneous with, the ground disturbing activities, is provided.

## **12D - REMOTE BACKCOUNTRY**

These are the remote areas of the Forest outside of Wilderness. Included are the following areas: Adams Peak, Archer Knob, Benson Run, Beards Mountain, Big Schloss, Crawford Mountain, Church Mountain, Beech Lick Knob, Shenandoah Mountain (WV), Dolly Anne, Duncan Knob, High Knob, Elliott Knob, Gum Run, Jerkemtight, Laurel Fork, Little Alleghany, Little Mare Mountain, Shaws Ridge, Rich Patch, Great North Mountain, Warm Springs Mountain, Hog Pen, Little River, Mill Mountain, Northern Massanutten, Oak Knob, Oliver Mountain, Lynn Hollow, Bald Ridge, Lick Run, Paddy Mountain (Lee), Rough Mountain, Laurel Fork, West Blue Ridge (Whites Peak), North Mountain (Lee), Vesuvius, Southern Massanutten, The Friars, and Three Sisters. There are approximately 252,100 acres allocated to this management prescription area.

### ***Emphasis:***

Recreation opportunities are provided in large remote, core areas where users can obtain a degree of solitude and the environment can be maintained in a near-natural state. There is little evidence of humans or human activities other than recreation use and nonmotorized trails. These areas are generally 2500 acres or greater in size, unless the area is adjacent to Wilderness.

### ***Desired Condition:***

These areas provide large tracts of backcountry recreation opportunities with a semi-primitive emphasis that allow limited motorized access. Visitors will be able to choose from a variety of predominately non-motorized recreation opportunities such as hiking, backpacking, mountain bike riding, horseback riding, rock climbing, nature study, hunting, and fishing. Limited motorized activities are also available including dispersed camping and pleasure driving. New motorized uses are not provided. Closed roads are available for both non-motorized uses as well as administrative access.

These areas are managed and monitored to absorb low to moderate levels of recreation use while protecting air, soil, vegetation, and water resource conditions. Limitations of use will occur if the dispersed activity results in, or is expected to result in, negative affects to the local ecosystem. Human activities may be evident in some places. Visitors will occasionally see other people, especially near the few open roads in these areas. Outdoor skills will be important for visitors in the more remote portions of these areas.

The landscapes of these areas are primarily shaped by natural processes (floods, storms, insects, diseases, and fires). Landscapes feature a structurally diverse mid- to late successional forest community with a forested canopy, with occasional pastoral and historic/cultural enclaves. The valued character of the natural appearing and cultural landscapes either appears intact or is actually intact. There are no noticeable deviations.

Prescribed fire plays an important role in the maintenance of forested communities found throughout this management prescription area. Prescribed fire is used to restore and maintain threatened and endangered species habitats, to ensure the continued presence of fire-dependent southern yellow pine and oak woodland ecosystems, to maintain fire-adapted forested communities, and to reduce fuel buildups. Naturally ignited wildland fires are used for achieving ecological objectives when possible. Aside from these occasional management activities, natural processes will eventually result in a large patch old growth forest matrix throughout most of this area interspersed with naturally occurring brushy and herbaceous openings. Cavity trees, cull trees, standing dead trees, and down logs will be common throughout the area as a result of natural mortality. Occasional large openings of early successional habitat may be created through natural disturbance.

Wildlife openings and old field habitats are maintained in a grass/forb or shrub/scrub condition. Wildlife species associated with area-sensitive mid- to late successional deciduous forest habitats are expected to inhabit this area. The protection of rare communities and species associates will be provided, along with protection measures for population occurrences for threatened, endangered, sensitive, and locally rare species.

## **Standards**

### **Terrestrial and Aquatic Species**

- 12D-001 Existing old fields, pastoral areas, wildlife openings, and other wildlife habitat improvements may be present and maintained. Expansion of existing openings and/or creation of new openings may occur. Non-invasive non-natives are sometimes used when establishing food plants for wildlife, but native species are preferred. Some openings provide permanent shrub/sapling habitats as a result of longer maintenance cycles.

### **Vegetation and Forest Health**

- 12D-002 Allow control of insect and disease outbreaks when necessary to protect scenic and recreational values, to reduce hazards to visitors, or for safety and legal reasons. When actions are needed, first consider biological controls, secondly hand-control methods, and finally pesticides. Utilize the least ecologically disruptive technique that will accomplish control of the pest.
- 12D-003 Suppression and eradication of non-native pests are allowed.
- 12D-004 Tree cutting may occur incidental to other management activities such as trail construction, maintenance, removal of hazard trees, fireline construction, benefit rare communities, etc. Mechanical equipment such as chainsaws is permitted.

### **Timber Management**

- 12D-005 These lands are unsuitable for timber production. Timber harvest is generally not allowed, subject to valid existing rights.
- 12D-006 Timber may be cut, sold, or removed if one of the following circumstances exists. The cutting, sale, or removal of timber in these areas is expected to be infrequent.
- (1) The cutting, sale, or removal of generally small diameter timber is needed for one of the following purposes and will maintain or improve one or more of the remote area characteristics;
- (i) To improve threatened, endangered, proposed, or sensitive species habitat; or
  - (ii) To maintain or restore the characteristics of ecosystem composition and structure, such as to reduce the risk of uncharacteristic wildfire effects, within the range of variability that would be expected to occur under natural disturbance regimes of the current climatic period;
- (2) The cutting, sale, or removal of timber is incidental to the implementation of a management activity not otherwise prohibited; or
- (3) The cutting, sale, or removal of timber is needed and appropriate for personal or administrative use.

### **Non-timber Forest Products**

- 12D-007 Personal use firewood cutting is permitted within 100 feet of roads.

### **Wildland Fire Management**

- 12D-008 Prescribed fire and wildfires are allowed to reduce wildland fire potential due to high fuel loadings, improve and maintain wildlife habitat, or to benefit fire-dependent and associated species such as table mountain pine and oak forests. Use natural fuel breaks such as streams, roads, rock slides, etc where possible to minimize fireline construction.

### Recreation

- 12D-009 These backcountry recreation areas are managed for the Semi-Primitive Non-Motorized (SPNM) or Semi-Primitive Motorized (SPM) Recreation Opportunities although inventoried ROS classes range from Semi-Primitive Non-Motorized (SPNM) to Roaded Natural (RN). See ROS Map.
- 12D-010 New non-motorized trails are allowed. Designation of new trails on case-by-case basis when there is a demonstrated need, interest, a partnership with user group committed to maintenance, and air, soil, vegetation and water resources are protected.
- 12D-011 Existing motorized roads and trails are monitored for impacts to soil and water quality and problems mitigated. Roads and motorized trails identified as problems are reconstructed, relocated, or decommissioned.
- 12D-012 Seasonal closures are used when needed to protect soil, water, and wildlife habitat security.

### Scenery

- 12D-013 Management activities are designed to meet or exceed a High Scenic Integrity Objective.

### Range

- 12D-014 Livestock grazing is not permitted.

### Minerals

- 12D-015 These areas are available for federal oil and gas leasing with a no surface occupancy stipulation. Other Federal minerals may be available on a case-by-case basis after full consideration of effects on semi-primitive recreation opportunities and values. The Laurel Fork area is not available for federal oil and gas leasing.
- 12D-016 These areas are not available for mineral materials for commercial or personal purposes. Administrative or free use of mineral materials is allowed when: a) the materials are used within the backcountry area itself; and b) use is necessary to protect the resources and values of the area.
- 12D-017 Private mineral rights exist in some areas. Roads, wells, and other necessary infrastructure associated with these rights are allowed. Requests for access to a non-Federal interest in lands pursuant to a reserved or outstanding right are recognized, and reasonable access is granted.

### Roads

- 12D-018 Roads may not be constructed or reconstructed unless:
- (1) A road is needed to protect public health and safety in cases of an imminent threat of flood, fire, or other catastrophic event that, without intervention, would cause the loss of life or property;
  - (2) A road is needed to conduct a response action under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) or to conduct a natural resource restoration action under CERCLA, Section 311 of the Clean Water Act, or the Oil Pollution Act;
  - (3) A road is needed pursuant to reserved or outstanding rights, or as provided for by statute or treaty;
  - (4) Road realignment is needed to prevent irreparable resource damage that arises from the design, location, use, or deterioration of a system road that cannot be mitigated by road maintenance. Road realignment may occur under this paragraph only if the road is deemed essential for public or private access, natural resource management, or public health and safety;
  - (5) Road reconstruction is needed to implement a road safety improvement project on a system road determined to be hazardous on the basis of accident experience or accident potential on that road;
  - (6) The Secretary of Agriculture determines that a Federal Aid Highway project, authorized pursuant to Title 23 of the United States Code, is in the public interest or is consistent with the

purposes for which the land was reserved or acquired and no other reasonable and prudent alternative exists; or

(7) A road is needed in conjunction with the continuation, extension, or renewal of a mineral lease on lands that are under lease or for a new lease issued immediately upon expiration of an existing lease. Such road construction or reconstruction must be conducted in a manner that minimizes effects on surface resources, prevents unnecessary or unreasonable surface disturbance, and complies with all applicable lease requirements, land and resource management plan direction, regulations, and laws. Roads constructed or reconstructed pursuant to this paragraph must be obliterated when no longer needed for the purposes of the lease or upon termination or expiration of the lease, whichever is sooner.

12D-019 Maintenance of system roads is permissible.

**Lands and Special Uses**

12D-020 These areas are unsuitable for wind energy development.

## 13 – Mosaics of Habitat

### ***Emphasis:***

The Forest-wide vision describes the desired condition for ecological systems diversity. This diversity will be achieved through many different practices across the Forest in many of the management prescription areas. Creating and maintaining the diverse ecosystems requires active management activities in some cases. Prescribed fire can be used in many areas of the Forest, but it is a strong emphasis in this prescription area. This prescription area is also the predominant area where timber harvest will be used to create and maintain the ecosystem diversity objectives and where wildlife habitat management activities will be focused for both ecological objectives and recreational (hunting and wildlife viewing) objectives. Another primary objective will be meeting the demand for timber products through timber harvest, salvage of dead and dying trees, and personal use for firewood. There are approximately 507,000 acres allocated to this management prescription area.

The mix of forest communities desired varies by the landtype associations in which this prescription is allocated; however, the canopy generally consists of a mixed hardwood forest composed primarily of oaks and hickories in the uplands. The overstory is often relatively closed, multi-layered, and moderately to densely stocked. The midstory is also multi-layered composed of a diversity of shrubs, vines, grape arbors, and saplings. On drier sites a more open woodland character is present with a more diverse understory of shrubs, grasses and forbs. Southern yellow pines increase as sites become drier on south-facing slopes and towards the ridge tops. On drier, xeric pine/hardwood sites, a simpler midstory structure exists. Poplar, birch, and hemlock increase as moisture availability increases downslope to the coves. These cove forests, composed of mixed mesophytic and dry-to mesic oak communities, are structurally diverse with canopy gaps and small openings.

### ***Desired Condition:***

The landscape character of this area generally retains a natural, forested appearance. The landscape features structurally diverse forest communities, ranging from rich cove and mesic hardwood/pine forests, with predominantly closed canopies, to xeric pine/hardwood open woodlands, with a mosaic of grass/forb/shrub understories. A mid- to late-successional forest greater than 40 years of age dominates the landscape, but is interspersed with forest communities greater than 100 years of age and temporary and permanent grasslands and shrublands, providing diversity for both wildlife habitat and scenic attractiveness.

In cove and mesic hardwood/pine forests, with predominantly closed canopies, species needing large areas of mature trees with some level of overstory structural diversity (canopy gaps) are present. In mature mesic and xeric pine/hardwood open woodlands, with a mosaic of grass/forb/shrub understories, species needing large areas of both mature trees and an open structure are present. In addition, xeric pine/hardwood open woodlands provide habitat for post-breeding and migratory stop-over needs for birds species normally associated with forest interior habitat for breeding. A dispersed system of temporary and permanent forest openings and old fields exist, providing herbaceous and shrubby ground cover and abundant insect populations for breeding, post-breeding, and migrating species, such as birds and bats.

Early-successional habitat in the 2100 to 4000-foot elevation range for species like the golden-winged warbler, is abundant in the form of open woodlands, regenerating forests, old fields, balds, and utility rights-of-way. Many patches of these habitats are over 20 acres in size and, where compatible with other multiple-use objectives, are clustered on the landscape to provide optimum habitat for area-sensitive or area dependent species.

Fire-adapted and dependent ecosystems are plentiful. Open woodland conditions are common and this habitat is enhanced from the integrated use of timber harvest and prescribed burning, independently or concurrently on the same acres in an integrated fashion.

Portions of this prescription area are managed by natural processes and prescribed fire and contribute to the older aged forest component across the prescription area. These lands include riparian areas, areas of low productivity, and lands where commercial timber harvest is uneconomical. The resulting landscape structure of

this land allocation provides a forest matrix appropriate for linking large and medium-sized late successional to old growth patches. Trees greater than 120 years of age occur commonly as individuals, groups, or large areas. Cavity trees, cull trees, standing dead trees, and down logs are common throughout the area as a result of natural mortality.

Rockfalls, caves, road culverts, uprooted trees, and trees larger than 22 inches in diameter serve as potential dens. Known den trees are retained in harvest areas and future den trees will be recruited over the long term on the many acres in older age classes.

Water sources for wildlife, including ephemeral ponds for herpetofauna, are present.

Prescribed fire plays an important role in the maintenance of many of the forested communities found throughout this management prescription. Prescribed fire is frequently used to encourage oak sprouting and reduce competition from more shade tolerant species, to restore and maintain threatened and endangered species habitats, and to ensure the continued presence of fire-dependent southern yellow pine ecosystems. Prescribed fire and commercial timber harvest are employed to maintain the hard mast producing capabilities of the forest communities containing oaks and hickories.

A diversity of tree species of mast bearing age in dominant and co-dominant crown classes is common. Trees with open-grown crowns receiving plenty of sunlight produce the most acorns and the creation of openings 2 acres in size and greater to get full sunlight on the forest floor helps maintain oak regeneration as well as stimulate soft mast and browse production. A diversity of forest age classes is also important in these areas to provide soft mast and herbaceous vegetation.

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. Timber growth on suitable land is emphasized at a higher level than other management prescription areas but well within the biological capabilities for sustained yield production.

Roads provide access for management activities and access for various recreational experiences such as hunting and wildlife viewing. Roadsides can also provide additional open canopy habitat. However, roads also may disturb some wildlife species, particularly during breeding, nesting and brooding times and much of the area will be managed with seasonal road closures to protect physical and biological resources and wildlife habitat.

A range of recreational settings from roaded frontcountry to more remote areas are found in this area. Access is provided through portions of the area on Forest Service and State roads with a gravel or native surface. Challenging opportunities may exist for high-clearance and 4-wheel drive vehicles on open roads.

Forest visitors on foot, horse, or bikes may experience some solitude in portions of this prescription area where roads are managed as closed, but feelings of challenge and risk are not expected. Comfort, sanitation, and camping facilities are not provided, although primitive camping can be enjoyed throughout the area. During most of the year, occasional encounters with other forest visitors can be expected; however, these encounters are more frequent during spring and fall hunting seasons. This area provides excellent opportunities for wildlife viewing and photography, hunting, hiking, equestrian use, mountain biking and dispersed camping.

## **13 Mosaics of Habitat Standards**

### **Terrestrial and Aquatic Species**

13-001 Existing old fields, pastoral areas, wildlife openings, and other wildlife habitat improvements may be present and maintained. Expansion of existing openings and/or creation of new openings may occur. Non-invasive non-natives are sometimes used when establishing food plants for wildlife, but native species are preferred. Some openings provide permanent shrub/sapling habitats as a result of longer maintenance cycles.

### **Vegetation and Forest Health**

- 13-002 Manage for a diversity of oak species to minimize yearly fluctuations in acorn supplies.
- 13-003 The forest health strategy is to minimize the occurrence of pest problems by managing host-type conditions. Suppression of pests, both non-native and native, is accomplished with all available integrated pest management tools.
- 13-004 Proactively manage species composition and tree vigor in stands at a level that reduces susceptibility to damage from insect and disease infestations and other forest health problems like oak decline. Suppress native and non-native insects and diseases using an integrated pest management approach.

#### **Timber Management**

- 13-005 Timber production is a suitable use in these areas. Some portions of the areas are identified as unsuitable for timber production due to the timber suitability analyses in Appendix C.
- 13-006 Use even and uneven-aged silvicultural systems. Uneven-aged forest management (e.g. group selection, individual tree selection) practices are designed to result in forest structure and composition consistent with late-successional deciduous forest habitats over the long-term.
- 13-007 Thinning and group selection may be employed to increase the structural diversity of the prescription area.
- 13-008 Thinning is frequently used to increase volume production and tree vigor and manage species composition. Uneven-aged management, using group selection, may be employed to reduce impacts to scenery.
- 13-009 Regeneration harvest areas range in size from 2 to 40 acres.
- 13-010 Regeneration harvest areas are primarily coppice with reserves with 15- 25 square feet of basal area per acre left to ensure adequate sunlight for oak regeneration and two-aged silvicultural systems which leave 20-40 square feet of basal area per acre. In order to provide vertical diversity and future mast production, the residual stand should be primarily composed of former co-dominant trees.
- 13-011 Clearcut harvest systems may occur when necessary to achieve specific wildlife habitat objectives. Thinning and group selection silvicultural systems are also employed to provide the structural diversity required by some species within this habitat association.
- 13-012 Regenerate pine forest types artificially or naturally to native pine species that commonly occur within the same land type association. Regenerate pine-hardwood forest types artificially or naturally to mixed pine-hardwood stands of native species that commonly occur within the same land type association.
- 13-013 Salvage of dead and dying trees is allowed.

#### **Non-timber Forest Products**

- 13-014 Commercial and personal use firewood collection is allowed.

#### **Wildland Fire Management**

- 13-015 Prescribed fire and wildfire may be used to: create open woodland habitat conditions; create openings that stimulate soft mast production and browse; encourage oak sprouting; maintain, restore, and enhance native forest communities; ensure the continued presence of fire-dependent ecosystems; improve threatened, endangered, sensitive, and locally rare species habitat; and reduce fuel buildups. It is also used in conjunction with site preparation to accomplish silvicultural treatments.

#### **Recreation**

- 13-016 Wildlife openings, including linear strips, are signed to protect established vegetation from recreational use (e.g. horseback riding, mountain biking, off-highway vehicle use, and camping) when a reoccurring problem of resource damage exists.

**Scenery**

13-017 Management activities are designed to meet or exceed the following Scenic Integrity Objectives:

Inventoried Scenic Class	1	2	3	4	5	6	7
Scenic Integrity Objectives	H	M	L	L	L	L	L

13-018 Clustering of early successional habitats occurs primarily within scenic classes 3 through 7.

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