

**Appendix D- Forest Standards and Guidelines/Design
Criteria/Mitigation Measures**

Air Quality

Forest Service Manual and Handbook management direction for air quality is in FSM 2500 - Watershed and Air Management.

| Management Direction for Air Quality | | |
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| Type | Number | Direction Description |
| Standard | AQ03 | Use screening procedures specific to Dolly Sods and Otter Creek Wildernesses and federal land manager AQRV guidance when reviewing Prevention of Significant Deterioration (PSD) permits. |
| Standard | AQ04 | Conduct management activities (including permitted activities) in a manner that does not result in a significant contribution to a violation of National Ambient Air Quality Standards, a violation of applicable provisions in the State Implementation Plan, or an adverse impact to AQRVs in Dolly Sods and Otter Creek Wildernesses. |
| <i>See also Fire Management Goal FM08 and Standards FM12, FM14, FM15, FM16. Additional management direction for Class I areas can be found in the Air Quality section of Management Prescription 5.0 – Designated Wilderness - in Chapter III.</i> | | |

Soil and Water Resources

Forest Service Manual and Handbook management direction for soil and water resources is in FSM 2500 - Watershed and Air Management, and FSM 3500 - Cooperative Watershed Management; and in FSH 2500, 2509.13 - Burned-Area Emergency Rehabilitation, FSH 2509.18 - Soil Management, and FSH 2509.22 - Soil and Water Conservation.

| Management Direction for Soil and Water | | |
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| Soils | | |
| Type | Number | Direction Description |
| Standard | SW03 | Disturbed soils dedicated to growing vegetation shall be rehabilitated by fertilizing, liming, seeding, mulching, or constructing structural measures as soon as possible, but generally within 2 weeks after project completion, or prior to periods of inactivity, or as specified in contracts. Rip compacted sites when needed for vegetative re-establishment and recovery of soil productivity and hydrologic function. The intent is to minimize the time that soil is exposed on disturbed sites or retained in an impaired condition. |
| Standard | SW04 | Erosion prevention and control measures shall be used in program and project plans for activities that may reduce soil productivity or cause erosion. |

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| Standard | SW05 | Maintain at least 85 percent of a vegetation management activity area in a non-detrimentally disturbed condition. Existing system roads and trails, and other administrative facilities within the activity area, are not considered detrimentally disturbed conditions when assessing compliance with this standard. |
| Standard | SW06 | Severe rutting resulting from management activities shall be confined to less than 5 percent of an activity area. |
| Standard | SW07 | Use of wheeled and/or tracked motorized equipment may be limited on soil types that include the following soil/site area conditions: a) <u>Steep Slopes (40 to 50 percent)</u> – Operation on these slopes shall be analyzed on a case-by-case basis to determine the best method of operation while maintaining soil stability and productivity. b) <u>Very Steep Slopes (more than 50 percent)</u> – Use is prohibited without recommendations from interdisciplinary team review and line officer approval. c) <u>Susceptible to Landslides</u> – Use on slopes greater than 15 percent with soils susceptible to downslope movement when loaded, excavated, or wet is allowed only with mitigation measures during periods of freeze-thaw and for one to multiple days following significant rainfall events. If the risk of landslides during these periods cannot be mitigated, then use is prohibited. d) <u>Soils Commonly Wet At Or Near The Surface During A Considerable Part Of The Year, Or Soils Highly Susceptible To Compaction</u> . Equipment use shall normally be prohibited or mitigated when soils are saturated or when freeze-thaw cycles occur. |
| Standard | SW08 | Management actions that have the potential to contribute to soil nutrient depletion shall be evaluated for the potential effects of depletion in relation to on-site acid deposition conditions. |
| Standard | SW09 | Winter logging is allowed but may only be used where it will meet Forest-wide soil and water quality standards. |
| Guideline | SW11 | Soil stabilization procedures should take place as soon as practical after earth-disturbing activities are completed or prior to extended periods of inactivity. Special revegetation measures may be required. |
| Guideline | SW13* | Consider liming soils with a surface pH of less than 5.5 on seeding projects, except where there is an objective to maintain acidic ecosystems. |
| Guideline | SW14 | Mulch should be applied on severely eroded areas, or areas with high potential for erosion, such as new road cut and fill slopes. |
| Guideline | SW15 | Topsoil should be retained to improve the soil medium for plant growth on areas to be disturbed by construction. Topsoil should be salvaged from an area during construction and stockpiled for use during subsequent reclamation, or obtained from an alternate site. On some areas, soil material may have to be added to obtain vigorous plant growth. Soil to be used for this purpose should have chemical tests made to determine its desirability for use. |
| Guideline | SW16 | Where the removal of vegetative material, topsoil, or other materials may result in erosion, the size of the area may be limited from which these materials are removed at any one time. |
| Guideline | SW18 | Topsoil or substitute materials used in reclamation should consist of friable soil reasonably free of grass, roots, weeds, sticks, stones, or other foreign material. |

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| Guideline | SW19** | <p>Management activities that may result in accelerated erosion and loss of organic matter should have one or more of the following practices applied to mitigate potential effects:</p> <ul style="list-style-type: none"> a) Limiting mineral soil exposure, b) Appropriately dispersing excess water, c) Ensuring sufficient effective groundcover, d) Stabilizing disturbed soils through revegetation, mulching, or other appropriate means, e) Preventing or minimizing excessive compaction, displacement, puddling, erosion, or burning of soils, and f) Preventing or minimizing the initiation or acceleration of mass soil movement (e.g., slumps, debris flows, or landslides). | | | | | | | | | | |
| Water Quality and Hydrology | | | | | | | | | | | | |
| Standard | SW23 | Logging and construction equipment shall not be washed in stream courses, nor shall material from washed equipment be allowed to drain into surface waters. | | | | | | | | | | |
| Guideline | SW26*** | Management activities should maintain stream flow regimes to provide for channel stability and stream functions that support healthy riparian habitat, aquatic habitat, and downstream uses. | | | | | | | | | | |
| Stream Channels, Lakes, and Wetlands | | | | | | | | | | | | |
| Standard | SW34 | <p>No programmed timber harvest shall occur within the channel buffers identified in the table in SW37. Tree removal from the buffers may only take place if needed to meet aquatic or riparian resource management needs, or to;</p> <ul style="list-style-type: none"> a) Provide habitat improvements for aquatic or riparian species, or threatened, endangered, sensitive, and locally rare species; b) Provide for public or worker safety; c) Construct or renovate an approved facility; d) Construct temporary road, skid road, or utility corridor crossings; e) Conduct aquatic or riparian-related research, or f) Allow for cable yarding. | | | | | | | | | | |
| Standard | SW35 | Where new roads and skid roads cross stream channels, channel and bank stability shall be maintained. | | | | | | | | | | |
| Standard | SW36 | When stream crossing structures are removed, stream channels shall be restored to their near-natural morphology (width, depth, and gradient associations for streambeds, banks, floodplains, and terraces). Disturbed soil shall be stabilized. | | | | | | | | | | |
| Standard | SW37 | <p>During project-level planning and implementation, determine channel buffers for streams that would potentially be affected by proposed activities. The following table represents default buffer widths to be applied to both sides of the channel.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Stream Classification</th> <th>Buffer Width</th> </tr> </thead> <tbody> <tr> <td>Perennial</td> <td>100 feet</td> </tr> <tr> <td>Large Intermittent (>50-acre drainage area)</td> <td>100 feet</td> </tr> <tr> <td>Small Intermittent (<50-acre drainage area)</td> <td>50 feet</td> </tr> <tr> <td>Ephemeral</td> <td>25 feet</td> </tr> </tbody> </table> <p>Buffer widths may be adjusted based on interdisciplinary review and site-specific field investigation. The buffers shall, at a minimum, encompass the riparian area defined on the basis of soils, vegetation and hydrology and the ecological functions and values associated with the riparian area.</p> | Stream Classification | Buffer Width | Perennial | 100 feet | Large Intermittent (>50-acre drainage area) | 100 feet | Small Intermittent (<50-acre drainage area) | 50 feet | Ephemeral | 25 feet |
| Stream Classification | Buffer Width | | | | | | | | | | | |
| Perennial | 100 feet | | | | | | | | | | | |
| Large Intermittent (>50-acre drainage area) | 100 feet | | | | | | | | | | | |
| Small Intermittent (<50-acre drainage area) | 50 feet | | | | | | | | | | | |
| Ephemeral | 25 feet | | | | | | | | | | | |

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| Standard | SW38 | The removal of large woody debris is allowed if it poses a risk to water quality, degrades habitat for aquatic or riparian wildlife species, or when it poses a threat to public safety (e.g., water recreation), private property, or Forest Service infrastructure (e.g., bridges). The need for removal is determined on a case-by-case basis with consideration for aquatic and riparian resource needs. |
| Standard | SW39 | Use no-till cultivation methods for wildlife opening maintenance within channel buffers. |
| Standard | SW40 | Skid trails and landings shall not be constructed within 100 feet of perennial, intermittent, and ephemeral channels except at crossings or when location outside the 100-foot zone pose a greater risk to aquatic or riparian resources. The 100-foot filter strip may be modified based on site-specific conditions such as soil type, slope, and stability. |
| Standard | SW43 | Channel buffers shall not be available for commercial mineral material development. |
| Standard | SW44 | New roads are allowed within channel buffers but are restricted to essential crossings. Construction of roads parallel to the channel shall be avoided within the channel buffer. |
| Standard | SW45 | New roads within the channel buffer shall be designed to minimize impacts on aquatic and riparian resources. |
| Standard | SW46 | New structures (culverts, bridges, etc.) shall be designed to accommodate storm flows expected to occur while the structures are in place. Use scientifically accepted methods for calculating expected storm flows. |
| Standard | SW47 | Personal use firewood shall not be removed from stream channels or banks. |
| Guideline | SW48 | Existing trails in channel buffers may be reconstructed or relocated to reduce impacts to riparian and aquatic resources. |
| Guideline | SW50 | Maintained wildlife openings and associated access routes identified as degrading riparian or aquatic conditions should be mitigated or closed and restored. New wildlife openings within channel buffers may occur where needed to provide habitat for riparian species, or TEP, RFSS, or locally rare species, and where maintenance for these openings and their access routes can be achieved without degrading riparian or aquatic conditions. |
| Guideline | SW51 | Ground disturbance should be avoided within seeps, vernal pools, bogs, fens, and other wetlands during project implementation. These areas should be managed to protect wet soils and rare plants and provide wildlife watering sources using the following protection: a) No new system roads or skid roads should be located within these areas except at essential crossings. Such crossings should be designed to minimize disturbance to the extent practical. b) Logs should not be skidded through these areas. Keep slash and logs out of them. c) Where available, a canopy of 60-100 percent crown closure should be maintained within and adjacent to these areas, unless a more open canopy is needed for TEP species or RFSS management. d) Mast trees or shrubs may be planted in seeps if mast plants are currently lacking. |
| Guideline | SW60 | Crossings should be designed so stream flow does not pond above the structure during normal flows to reduce sediment deposition and safely pass high flows. |
| Guideline | SW62 | Stream crossing construction on temporary and permanent roads should be completed as soon as practical, with mitigation as needed to minimize the potential for sedimentation. |

Vegetation

Forest Service Handbook management direction for vegetation is in FSH 2409.17 - Silvicultural Practices Handbook. Forest Service Manual and Handbook management direction for snags and coarse woody debris is in FSM 5150 – Fuels, FSM 2550 - Soil Management, and FSH 2509.18 - Soil Management Handbook. Direction for Threatened, Endangered, and Sensitive Plants is in FSM 2670 - Threatened, Endangered and Sensitive Plants and Animals. Direction for pesticide use management is in FSM 2150.

| Management Direction for Vegetation | | |
|---|---------------|---|
| Type | Number | Direction Description |
| Vegetation Diversity | | |
| Guideline | VE04 | Use lands unsuited for timber production (MPs 5.0, 6.2, 5.1, portions of 8.0) as patches of potential old growth. In MPs with suitable timberlands (MPs 3.0, 6.1, portions of 4.1), identify potential old growth areas based on management direction and emphasis, as well as information on delineating potential old growth in Appendix B. |
| Guideline | VE05 | To provide for dispersion of vegetation diversity and a meaningful analysis of cumulative effects, mid-level and project planning should use watersheds (5 th - 7 th level, typically) as a unit of measurement to identify opportunities and analyze effects for vegetation management projects. Exceptions can be made for site-level activities such as hazard tree removal, localized timber stand improvement, or salvage. |
| Guideline | VE06 | <p>Native plant species should be used to revegetate, restore, or rehabilitate lands where natural regeneration is not likely to occur in a timely manner. Non-native, non-invasive plant species may be used:</p> <ul style="list-style-type: none"> a) When needed in emergencies to protect resources (soil stability, water quality, etc) b) As an interim non-persistent measure to help re-establish native plants c) When native plant species are not available d) In permanently altered plant communities. <p>When project objectives justify the use of non-native plant materials, documentation explaining why non-natives are preferred should be part of the project planning process.</p> |
| See also the Vegetation Desired Conditions, Goals, and Objectives for Management Prescriptions 3.0, 4.1, and 6.1. | | |
| Rare Plants and Regional Forester's Sensitive Plant Species | | |
| Standard | VE12 | Allow collection of RFSS plants only for research or scientific purposes. |
| Standard | VE13 | For management actions that have been identified by the Forest as likely to cause a negative effect on RFSS populations, negative effects shall be avoided or minimized to the maximum extent practical while still accomplishing the purpose of the project or action. Unavoidable negative effects shall be mitigated to the extent practical and consistent with the project purpose. |

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| Type | Number | Direction Description |
| Guideline | VE14 | Rare communities should be identified during project analysis. Management actions should avoid rare communities unless management is necessary to maintain, enhance, or restore a particular community. Conservation and management measures for rare communities should be determined on a case-by-case basis. |
| Guideline | VE15 | Areas of non-native invasive plants within rare plant habitat should be identified and mapped during project-level analysis. |
| Guideline | VE16 | Use Forest Service-approved portions of Conservation Strategies and Agreements, as appropriate, in the management of sensitive species habitat to help keep management actions from contributing to a trend toward listing for these species. |
| Terrestrial Ecosystems | | |
| Guideline | VE17 | Collect, interpret, and display information on terrestrial ecosystems to: a) Determine the kinds and intensities of inventories needed, b) Identify and classify rare communities to aid in conservation of threatened, endangered, and sensitive plants and animals, c) Add to the Terrestrial Ecological Unit Inventory (TEUI) of the Forest, d) Predict locations of rare plants or their habitats from the TEUI, and e) Predict effects to terrestrial ecosystems from various management options at the project level. |
| Guideline | VE18 | Use the National Vegetation Classification system or other appropriate classification system, in the Forest TEUI. Assure that the TEUI is useful and meaningful to land managers at all levels. |
| Non-native Invasive Species (NNIS) | | |
| Standard | VE21 | On-Forest source sites for gravel and borrow materials shall be inspected for NNIS before materials are processed, used, or transported from the source site to the project area. Gravel or borrow material source sites with NNIS present shall not be used, unless effective treatment or other mitigation measures are implemented to prevent the spread of NNIS. |
| Standard | VE22 | Projects that may contribute to the spread or establishment of noxious weeds shall be designed to include measures to reduce the potential for spread and establishment of noxious weed infestations. |
| Guideline | VE23 | All seed used on National Forest System lands should be certified to be free of seeds from noxious weeds listed on the current <i>All States Noxious Weeds List</i> . |
| Guideline | VE24 | NNIS management should determine the presence, location, and amount of infestations. Management strategies should also identify: a) Methods and frequency for treating infestations, b) Treatment procedures and restrictions, c) Reporting requirements, and d) Follow-up or monitoring requirements. |
| Guideline | VE25 | Special use permits should include language where appropriate to reduce the risk of NNIS invasion and spread. |
| Integrated Pest Management | | |
| Guideline | VE27 | Where pest problems occur, the selection of corrective measures should take into account management objectives, effectiveness, safety, environmental protection, and cost. |
| Pesticide Management | | |
| Standard | VE29 | All permittee, licensee, and grantee pesticide-use proposals and plans shall be reviewed to ensure that pesticide use on NFS lands complies with FS requirements. Proposals and plans shall be approved by the appropriate line officer. |

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| Type | Number | Direction Description |
| Standard | VE30 | Allow utility companies to maintain their rights-of-way through NFS lands using pesticides and other integrated vegetation management treatments, based on an appropriate environmental analysis. |
| Standard | VE31 | Aerial application of pesticides is prohibited when rain or foggy weather is present or predicted within 4 hours of application. Avoid aerial application when wind velocities would cause excessive drift, or high temperature or low relative humidity would prevent adequate coverage. Adjust droplet size to attain adequate coverage and reduce the risk of drift. |
| Standard | VE32 | Unless specifically registered for aquatic use, ground application of pesticides shall be conducted such that they do not enter surface waters, wetlands, or sink holes. |
| Standard | VE33 | Where broadcast sprays are used on federal projects, an untreated zone of at least 100 feet must be left adjacent to private property, unless the private property owners waive this restriction in writing. |
| Standard | VE34 | When a water carrier is used on pesticide projects and water is drawn from natural sources, the natural source must be protected from back siphoning. |
| Standard | VE35 | All reasonable efforts shall be made to notify adjacent landowners and persons within the treatment area prior to application of restricted use pesticides. |
| Guideline | VE36 | During environmental analysis for pesticide use, other reasonable alternatives should be evaluated to achieve the purpose and need of the project. |
| Guideline | VE37 | Pesticide application within or adjacent to developed recreation areas should be limited to periods when the potential of pesticide exposure to Forest users is minimal. |
| Guideline | VE38 | Use application techniques that provide proper pesticide placement on the target area or species. Low pressure spray equipment is preferred. |
| <p><i>See also Soil and Water Goals SW02 and SW31, Fire Management Goal FM06, TEP Species Goals TE12 and TE29, Wildlife and Fish Goal 01, Scenery Goal SM01, Timber Goals TR01 and TR21, Range Goal RA11, Fire Management Objective FM10, TEP Species Objective TE30, Wildlife and Fish Objectives WF09, WF10, WF11; Timber Objective TR04, Soil and Water Standard SW03, TEP Species Standards TE14, TE23, TE24, TE25, TE30, TE31, TE32, TE33, TE35, TE36, TE37, TE42, TE43, TE58, TE59, TE64, TE67; Wildlife and Fish Standard WF13, Heritage Resources Standards HR05 and HR06, Range Standards RA04 and RA17, Minerals Standard MG15, Soil and Water Guidelines SW11, SW19, SW51; TEP Species Guidelines TE40, TE41, TE73, TE81; Wildlife and Fish Guideline WF16, Recreation Guideline RC15, Scenery Guideline SM06, Heritage Resources Guideline HR12, Range Guideline RA20, Lands and Special Uses Guideline LS32.</i></p> | | |

Threatened, Endangered, and Proposed Species

Forest Service Manual and Handbook management direction for Threatened, Endangered, and Proposed (TEP) species is in FSM 2600 – Wildlife, Fish, and Sensitive Plant Habitat Management, and in FSH 2609.13 – Wildlife and Fisheries Program Management Handbook. See FSM and FSH direction for other appropriate resources in this section.

Management Direction for TEP Species

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| Type | Number | Direction Description |
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| General Direction | | |
| Standard | TE06 | When proposed exploration or development of privately owned mineral rights may adversely affect TEP species or habitat, the Forest shall work with state and federal mineral operation permitting agencies to reduce adverse effects. |
| Standard | TE07 | Special use permits may be authorized in TEP species habitat if the uses do not adversely affect populations or habitat. This standard does not apply to Indiana bat or running buffalo clover. See special uses direction for these species, below. |
| Cave Habitat and Species | | |
| Standard | TE08 | Cave entry during closed periods for scientific study and observation may be permitted by Forest Supervisor’s written approval and permit from USFWS or delegated authority. |
| Standard | TE09 | Gates or fences installed at cave entrances shall allow free entry and exit by TEP species and shall not restrict normal airflows. |
| Standard | TE10 | Gate installation that disturbs a cave feature or floor must have an archaeological survey prior to disturbance. |
| Standard | TE11 | Gates and fences shall be monitored and maintained. Base monitoring frequency on past cave visits, access, and potential for disturbance. Maintenance and repair of gates shall be undertaken within a reasonable time frame from vandalism discovery. |
| <i>Additional Forest-wide direction to address the needs of specific TEP species is identified below.</i> | | |
| Virginia Big-Eared Bat | | |
| Standard | TE13 | Before taking actions on buildings that are within 6 miles of hibernacula, maternity colonies, or bachelor colonies, evaluate the buildings’ potential to serve as roosting habitat and take action to avoid or minimize impacts as necessary. Actions (disposal, construction, reconstruction, etc.) are allowed during the hibernation period (November 16–March 31) without roosting habitat evaluation. |
| Standard | TE14 | Within 200 feet of hibernacula, maternity colonies, or bachelor colonies, vegetation management shall only be conducted for: a) Bat habitat maintenance or improvement, b) Public safety, or c) Research. |
| Standard | TE15 | New recreation facility construction is prohibited within 200 feet of hibernacula, maternity colonies, or bachelor colonies. |
| Standard | TE16 | Prohibit public entry into caves and mines used as major hibernacula from September 1 to May 15. Minor hibernacula that harbor very few individuals in most years may remain open to the public if the Forest, USFWS, and WVDNR agree that public entry would be extremely unlikely to cause harm or mortality of Virginia big-eared bats. |
| Standard | TE17 | Prohibit public entry into caves and mines used as maternity or bachelor colonies during the nursery season from April 1 to September 15. |
| Standard | TE19 | Seismic exploration is prohibited within 200 feet of hibernacula, maternity colonies, or bachelor colonies unless it can be demonstrated that it would not have an adverse impact on bat populations or habitat. |

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| Management Direction for TEP Species | | |
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| Type | Number | Direction Description |
| Standard | TE20 | Explosives shall not be used within 200 feet of hibernacula, maternity colonies, or bachelor colonies unless analysis can demonstrate that this activity will not have an adverse effect on bat populations or habitat. Explosives outside of this area shall not be used when such use has potential to damage the cave or disturb the bat. |
| Standard | TE21 | New road or trail construction is prohibited within 200 feet of hibernacula, maternity colonies, or bachelor colonies. |
| Standard | TE22 | If any new Virginia big-eared bat hibernacula, maternity colonies, or bachelor colonies are discovered on the Forest, the Forest shall develop appropriate protection measures in cooperation with USFWS and WVDNR. These measures could include closure orders, signs, fences, or gates. |
| <p>Indiana Bat The following terms and definitions (see Glossary) are critical to understanding direction for Indiana bats:</p> <ol style="list-style-type: none"> 1. Primary Range 2. Hibernacula 3. Key Areas 4. Maternity site | | |
| Standard | TE23 | Retain all shagbark hickory trees 5 inches in diameter at breast height (dbh) or greater in harvest units except where public or worker safety concerns or research opportunities exist. |
| Standard | TE24 | After post-harvest treatments, retain an average of at least 6 snags per acre that are 9 inches dbh or greater within harvest units, except where public or worker safety concerns exist. Create additional snags, if needed, from the available leave trees to make up any difference. Prioritize snag retention and creation from the largest to the smallest dbh. |
| Standard | TE25 | Retain all known roost trees until such time as they no longer serve as roost trees <u>(e.g. lose their exfoliating bark or cavities, fall down, decay, or are no longer used by bats).</u> |
| Standard | TE26 | Where evidence of maternity colonies (reproductively active females or juveniles prior to August 15) is discovered, the Forest shall establish a 2.5-mile radius buffer around the evidence site and search for actual maternity colonies within this management zone. The radius may be adjusted if warranted by new scientific information. The search shall continue for 3 field seasons or until a maternity site is confirmed, whichever occurs sooner. While the search is ongoing, proposed actions in the management zone shall be reviewed in cooperation with USFWS and WVDNR to determine any site-specific protection measures that may be needed. If and when a maternity colony is found, the management zone shall be adjusted as specified in TE27. If no other evidence of maternity activity is found for 3 field seasons, the management zone shall expire. |
| Standard | TE27 | If a maternity site is discovered, establish a management zone centered on the site. The management zone shall not exceed a 2.5-mile radius unless site-specific factors or new scientific information indicate that a larger zone is needed. The zone may be smaller than a 2.5-mile radius if an evaluation of topography, known roost tree locations, proximity of permanent water, or other site specific habitat characteristics indicates that a smaller zone is likely to satisfy the habitat needs of the colony. Needed protection measures within the zone shall be determined at a site-specific level in cooperation with USFWS and WVDNR. |
| Standard | TE28 | If any new Indiana bat hibernacula are discovered on the Forest, the Forest shall develop appropriate protection measures in cooperation with USFWS and WVDNR. These measures could include closure orders, signs, fences, or gates. |

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| Type | Number | Direction Description |
| Indiana Bat Primary Range | | |
| Standard | TE31 | Management of vegetation 5 inches dbh or greater may only be implemented if activities: a) Maintain or improve Indiana bat or other TEP or Sensitive species' habitat, or b) Address public or worker safety concerns, or c) Achieve research objectives. |
| Standard | TE32 | Retain harvest unit snags greater than 5 inches dbh except where public or worker safety concerns exist. |
| Standard | TE33 | Leave at least 5 cull trees per acre, if available—preferably shagbark hickory, bitternut hickory, red oak, white oak, sugar maple, white ash, green ash, and/or sassafras. Prioritize cull retention from the largest to the smallest dbh. |
| Standard | TE34 | New livestock grazing areas shall not cause maintained openings to exceed 5 percent of each primary range. Allotment Management Plans shall be modified, if needed, to ensure allotment management is compatible with Indiana bat habitat management. |
| Standard | TE35 | When designing and implementing regeneration harvest units, the following direction shall be used to help retain appropriate leave trees for Indiana bat habitat: a) Preferred residual trees for shelterwood and two-aged regeneration harvests should include the following species as available: shagbark hickory, bitternut hickory, red oak, white oak, sugar maple, white ash, green ash, and/or sassafras. Prioritize residual trees from the largest to the smallest dbh. b) Retain clumps of live trees and shrubs at a rate of 1/3 an acre per 5 to 8 acres of regeneration harvest area. Clumps should be co-located with other retained features. |
| Standard | TE36 | Maintain a component of large over-mature trees, if available, in all uneven-aged harvest units to provide suitable roosting habitat. |
| Standard | TE37 | Regeneration harvest shall not cause the early successional (0-19 years) age class of forest stands to exceed 10 percent of each primary range at any time. |
| Standard | TE38 | Special use permits and federal mineral exploration and development may be allowed within the primary range if they are compatible with Indiana bat management. |
| Standard | TE39 | Explosives may be allowed within the primary range if it can be demonstrated that this activity will not have an adverse effect on bat populations or habitat. |
| Guideline | TE40 | Shelterwood and two-aged regeneration harvests are the preferred silvicultural methods. Alternate methods may be used to meet other vegetation or wildlife habitat objectives when compatible with Indiana bat habitat management. Thinning from below is the preferred management method for stands originating before 1905. Other appropriate or preferred measures to maintain or improve Indiana bat habitat within primary range may be developed under consultation with USFWS and WVDNR. |
| Guideline | TE41 | Without preventing the regeneration of desired tree species, sufficient basal area should be retained in even-aged harvest units to meet the habitat needs of Indiana bats. Basal area determinations should be coordinated between the project silviculturist and wildlife biologist, based on site-specific vegetative conditions and habitat needs. |
| Indiana Bat Hibernacula, Key Areas, and Maternity Sites | | |

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| Type | Number | Direction Description |
| Standard | TE42 | Management of vegetation that is less than 5 inches dbh generally may occur within 200 feet of the hibernacula, within key areas, or within 2.5 miles of known maternity sites during any time of the year, provided adverse disturbance to bats is avoided. |
| Standard | TE43 | Management of vegetation 5 inches dbh or greater may only be implemented within 200 feet of hibernacula or within key areas to: a) Maintain or improve Indiana bat, TEP, or Regional Forester Sensitive Species habitat, b) Address public or worker safety concerns, or c) Achieve research objectives. |
| Standard | TE44 | No new recreational facilities shall be constructed within 200 feet of hibernacula or within key areas. |
| Standard | TE45 | Prohibit public entry into caves and mines used as major hibernacula from September 1 to May 15. Minor hibernacula that harbor very few individuals in most years may remain open to the public if the Forest, USFWS, and WVDNR agree that public entry would be extremely unlikely to cause harm or mortality to Indiana bats. |
| Standard | TE46 | Construction or other permanent activities may only occur in key areas if they maintain or improve Indiana bat habitat or provide for public safety. |
| Standard | TE47 | Do not issue permits for special uses occurring within 200 feet of hibernacula that would adversely affect Indiana bat populations or habitat. |
| Standard | TE48 | Special use permits occurring within key areas and within 2.5 miles of maternity sites may be authorized if they are compatible with Indiana bat population maintenance or recovery. |
| Standard | TE49 | Seismic exploration is not allowed within 200 feet of hibernacula, within key areas, or within 2.5 miles of maternity sites unless analysis can demonstrate it would not have an adverse impact on bat populations or habitat. |
| Standard | TE50 | Explosives shall not be used within 200 feet of hibernacula, within key areas, or within 2.5 miles of active maternity sites, unless analysis can demonstrate that this activity will not have an adverse effect on bat populations or habitat. Explosives outside of these areas shall not be used when such use has potential to damage the cave or disturb the bat. |
| Standard | TE51 | New road or trail construction is prohibited within 200 feet of hibernacula. |
| Standard | TE52 | Surface occupancy for proposed federal mineral operations is not allowed within 200 feet of hibernacula or within key areas. |
| Standard | TE53 | Surface occupancy for proposed federal mineral operations within 2.5 miles of maternity sites shall be evaluated on a case-by-case basis. Any surface occupancy must be compatible with Indiana bat population maintenance or recovery. |
| Standard | TE54 | Establish and maintain a key area of at least 150 acres, if available, within each primary range. |
| Guideline | TE55 | A key area should be contiguous and located as close to the cave as possible. Where available, this area should include 20 acres of late successional forest, and an additional 130 acres of mid-to-late successional or late successional forest. |
| Guideline | TE56 | New road or trail construction should avoid key areas and maternity sites. |
| Cheat Mountain Salamander | | |

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| Management Direction for TEP Species | | |
|---|---------------|---|
| Type | Number | Direction Description |
| Standard | TE58 | Prior to proposed vegetation or ground disturbance in known or potential habitat, field surveys must be conducted and occupied habitat must be delineated. |
| Standard | TE59 | Ground and vegetation-disturbing activities shall be avoided within occupied habitat and a 300-foot buffer zone around occupied habitat, unless analysis can show that the activities would not have an adverse effect on populations or habitat. |
| Bald Eagle | | |
| Standard | TE60 | Maintain 1,500-foot protection zones around nest sites that have been active within the last three nesting seasons. Activities within this zone must be compatible with bald eagle management. Compatibility determinations shall be made on a case-by-case basis. |
| Standard | TE61 | Seasonal closure orders may be used to control human disturbance in the vicinity of nests. |
| Standard | TE62 | A nest and the tree or structure where it is located shall not be removed or damaged as long as any usable portion of the nest remains, regardless of the time elapsed since the nest was last used, unless there is a concern for public health or safety. |
| West Virginia Northern Flying Squirrel (WVNFS) | | |
| Standard | TE63 | Suitable habitat shall be determined using maps collaboratively produced by the Forest, USFWS, and WVDNR. These maps shall be reviewed during watershed or project analysis and refined when Forest, USFWS, and WVDNR biologists determine that suitable habitat is or is not present. All verified capture sites shall be included in the suitable habitat maps. |
| Standard | TE64 | Suitable habitat shall be considered occupied. Vegetation management activities in suitable habitat shall only be conducted after consultation with USFWS, and: a) Under an Endangered Species Act Section 10 research permit to determine the effects of an activity on WVNFS or to determine activities that would contribute to the recovery of the species, or b) To improve or maintain WVNFS or other TEP species habitat after research has demonstrated the beneficial effects of the proposed management, or c) When project-level assessment results in a no effect or may affect, not likely to adversely affect determination, or d) To address public safety concerns. |
| Standard | TE65 | New developed recreation facilities, such as visitor centers or campgrounds, shall not be constructed in suitable habitat. Smaller facilities—such as foot trails, trailheads, picnic sites, ¼ acre vistas—may be constructed if they result in a no effect or may affect, not likely to adversely affect determination. |
| Standard | TE66 | Development of federal gas and oil is generally allowed as long as: (a) it remains within the limits projected in the 1991 Environmental Assessment Oil and Gas Leasing and Development and (b) protection measures for WVNFS are developed through consultation with the USFWS prior to Forest Service approval of operations. |
| Shale Barren Rock Cress | | |
| Standard | TE67 | Vegetation manipulation and ground-disturbing activities are prohibited within shale barrens unless no feasible alternatives exist. Exceptions may be allowed for research or information-gathering activities. |
| Running Buffalo Clover | | |

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| Management Direction for TEP Species | | |
|---|---------------|--|
| Type | Number | Direction Description |
| Standard | TE70 | Special use permits occurring within occupied running buffalo clover habitat may be authorized only if they are compatible with population maintenance or recovery. |
| Standard | TE71 | To the extent practicable, avoid implementing activities in areas that support running buffalo clover that have the potential to eliminate or have long-term detrimental effects to populations, such as placement of fill and gravel; paving; constructing new roads, well sites, or ditching for pipelines. |
| Standard | TE72 | To the extent practicable, avoid conducting prescribed burns or constructing fuel breaks for prescribed burns through known running buffalo clover populations or habitat. If prescribed fire is used within running buffalo clover habitat, protect known populations by wetting or removing fuel from the immediate area. |
| Guideline | TE73 | Where needed to help maintain or restore running buffalo populations, the Forest should implement habitat management measures such as creating selective canopy openings, initiating controlled levels of disturbance, controlling invasive species, or creating patches of potentially suitable habitat in adjacent areas. Measures should be coordinated with the USFWS and WVDNR prior to implementation, and include pre and post implementation site evaluations. |
| Guideline | TE74 | Prior to changing access or use on roads or trails known to support running buffalo clover, estimates of potential frequency, timing, and severity of use should be made, and the Forest should develop appropriate protection measures in cooperation with USFWS and WVDNR. |
| Guideline | TE75 | Surveys for running buffalo clover should be conducted June through no later than mid-August. Surveys should be conducted by personnel trained specifically to identify running buffalo clover. |
| Guideline | TE76 | Prior to initiating project activities, running buffalo clover locations should be flagged so that managers, contractors, permittees, or cooperators are aware of running buffalo clover locations, unless it is determined on a case-by-case basis that marking populations would have more potential to cause negative effects. |
| Guideline | TE77 | Prior to initiating project activities, managers, contractors, permittees, or cooperators should be informed about avoiding or limiting management activities in the immediate vicinity of running buffalo clover populations within the project area. Projects should be monitored to ensure that populations are not detrimentally affected over the long term. |
| Guideline | TE78 | Maintenance mowing should be timed to benefit the species by reducing competition from other plants while avoiding periods of flowering and seed set. |
| Guideline | TE79 | When addressing private landowner access issues, work cooperatively with the landowner and the USFWS to minimize impacts to running buffalo clover. Inform the landowner of the presence of endangered species and the recommended actions to avoid impacts. Where possible, add conditions to Special Use Permits or develop written management agreements with the landowner in order to protect the species. If necessary, implement mitigation measures such as creating patches of potentially suitable habitat in adjacent areas, relocating plants or seeds, and/or constructing alternative access routes that would avoid long-term detrimental impacts to RBC. |
| Guideline | TE80 | Piling slash around running buffalo clover populations should be avoided. |

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| Management Direction for TEP Species | | |
|--|---------------|---|
| Type | Number | Direction Description |
| Guideline | TE81 | Where possible, roads supporting running buffalo clover that are created or disturbed during timbering operations should be closed to additional traffic after the project is completed. Seeding/mulching plans should be coordinated to avoid the use of potentially invasive species, particularly non-native invasive species known to compete with running buffalo clover such as European white clover and red clover. |
| Guideline | TE82 | If running buffalo clover populations are found within active grazing allotments, populations should be monitored to determine effects from grazing. If populations are being adversely affected by grazing activities, the allotment management plan should be adjusted appropriately to reduce or eliminate effects. |
| Guideline | TE83 | Gating or restricting access to roads or trails should be implemented when monitoring of a running buffalo clover population shows signs of excessive disturbance from road or trail traffic. |
| <p><i>See also Wildlife and Fish Goals WF01 and WF06, Vegetation Goals VE07 and VE08, Wildlife and Fish Objective WF09, Fire Management Standard FM12, Vegetation Standards VE12 and VE13, Wildlife and Fish Standard WF13, Minerals Standards MG09, MG34, MG48; Soil and Water Guideline SW51, Lands and Special Uses Guidelines LS04 and LS05.</i></p> | | |

Wildlife and Fish

Forest Service Manual and Handbook management direction for wildlife resources is in FSM 2600 - Wildlife, Fish, and Sensitive Plant Habitat Management, and in FSH 2609.13 - Wildlife and Fisheries Program Management Handbook.

| Management Direction for Wildlife and Fish | | |
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| Management Direction for Wildlife and Fish | | |
|---|---------------|---|
| Type | Number | Direction Description |
| Standard | WF13 | For management actions that have been identified by the Forest Service as likely to cause a negative effect on RFSS or Birds of Conservation Concern populations, negative effects shall be avoided or minimized to the maximum extent practical while still accomplishing the purpose of the project or action. Unavoidable negative effects shall be mitigated to the extent practical and consistent with the project purpose. |
| Standard | WF14 | For protection of cold water fisheries, apply the following to the channel buffers of perennial trout streams (stocked and native) during the period of October 1 to June 1: a) Potential sediment-producing ground disturbance exceeding two consecutive days shall only be initiated after consultation with a Forest fisheries biologist. b) Potential sediment-producing ground disturbance allowed during this period shall employ additional erosion control measures, seeding or mulching, applied concurrently with the activity. |
| Standard | WF15 | When activities are proposed near a known active raptor nest, a wildlife biologist shall be consulted for measures to avoid or mitigate disturbance. |
| Guideline | WF16 | When consistent with management prescription emphasis and direction, openings may be created and maintained in coordination with other resource projects to provide for vegetation diversity. Mechanical or chemical means, prescribed fire, or grazing may be used to help maintain openings. Native or desirable non-native, non-invasive trees and shrubs with high value for wildlife may be planted, released or pruned. |
| Guideline | WF17 | Temporary, seasonal, or permanent closures may be implemented for areas and transportation routes to address concerns over human-caused disturbances during critical life stages such as nesting, denning, or spawning. Coordinate closures with WVDNR. |
| Guideline | WF18 | Use Forest Service-approved portions of Conservation Strategies and Agreements, as appropriate, in the management of RFSS habitat to help keep management actions from contributing to a trend toward listing for these species. |
| Guideline | WF19 | Management actions should be designed and implemented so they do not fragment habitat for native and desired non-native fish species. |
| Guideline | WF20 | Activities with the potential for causing adverse effects should be avoided or mitigated to the extent possible within ½ mile of active peregrine falcon nests. Seasonal closure orders may be used to control human disturbance in the vicinity of peregrine falcon nests. |
| Guideline | WF21 | Passage for fish and other aquatic organisms should be provided at all new or reconstructed stream crossings of existing or potential fish-bearing streams. Exceptions may be allowed to prevent the upstream migration of undesired species. |
| Guideline | WF22 | Habitat improvement structures should be designed to complement riparian areas and management prescription emphasis. Improvement structures should be constructed of native materials where available. |
| Guideline | WF23 | Coordinate with WVDNR on their proposed introduction, reintroduction, stocking, or transplanting of native or desired non-native species. |
| Guideline | WF24 | Habitat maintenance, enhancement, and restoration opportunities for migratory birds that are identified during watershed or project-level analysis should be implemented to the extent they are consistent with management prescription emphasis and project purposes, and to the extent practical and allowed by budget constraints. |

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| Management Direction for Wildlife and Fish | | |
|--|---------------|------------------------------|
| Type | Number | Direction Description |
| <p><i>See also all direction for TEP Species; plus Fire Management Goal FM06, Recreation Goal RC07, Range Goal RA01, Fire Management Objective FM09, Vegetation Objectives VE01, VE02, VE03, Soil and Water Standards SW38 and SW39, Vegetation Standards VE13 and VE22, Heritage Resources Standards HR05 and HR06, Timber Standard TR08, Range Standard RA19, Soil and Water Guidelines SW26, SW50, SW51; Heritage Resources Guideline HR12, Timber Guidelines TR11 and TR24, Range Guideline RA08, Lands and Special Uses Guidelines LS03, LS04, LS05, LS30, and LS32; Roads and Facilities Guidelines RF12 and RF23.</i></p> | | |

Recreation Resources

Forest Service Manual and Handbook management direction for recreation resources is in FSM 2300 - Recreation, Wilderness, and Related Resource Management, FSM 2710 – Special Use Authorizations, and FSM 2720 - Special Uses Administration; and in FSH 2309.18 - Trails Management Handbook, and FSH 2709.11 - Special Uses Handbook.

| Management Direction for Recreation Resources | | |
|--|---------------|--|
| Type | Number | Direction Description |
| Recreation System Planning | | |
| Guideline | RC08 | The ROS should be used to evaluate and tailor proposed projects and activities in order to maintain desired recreation opportunities and settings. |
| Guideline | RC09 | Interpretive Service plans should emphasize information and interpretive programs that explain resource management direction and activities. |
| Guideline | RC10 | Recreation use should be measured consistent with National Visitor Use Monitoring or other research techniques. |
| Developed Recreation Sites in Public Sector | | |
| Guideline | RC15 | In and around developed recreation sites, trees may be removed every year for safety or visual reasons. |
| Guideline | RC16 | Location of recreational developments should be determined with priority given to correcting health and safety problems, protecting the environment, complementing prescribed recreation opportunities, and meeting public demand. |
| Guideline | RC17 | In and around developed recreation sites, commercial timber sales should normally occur between December 1 and April 1. |
| Developed Recreation Sites in Private Sector | | |
| Standard | RC18 | Private development of fuel, eating, camping, or other services shall not be permitted along the Highland Scenic Highway, unless clearly justified by site-specific corridor planning. |
| General Forest Areas | | |
| Standard | RC19 | Limit site occupancy to 14 days throughout the Forest, except as approved by the appropriate line officer. |
| Standard | RC20 | Camping shall not be allowed within 300 feet of the Highland Scenic Highway. |
| Standard | RC21 | Camping and day use are allowed on the Forest unless prohibited by closure order. |
| Standard | RC22 | Commercially owned facilities are prohibited within the general forest area. |
| Standard | RC23 | Horse or mechanized use may be prohibited on trails not designed or maintained for such use. |
| Guideline | RC24 | Facilities that may be provided in dispersed areas, consistent with the ROS, are: a) Sealed vault toilets. b) Trails and parking areas to reduce adverse impacts. c) Potable water. d) Access may be graveled, all-weather road. e) Trash collection facilities. f) Tables and fireplaces g) Bridges h) Shelters i) Stock facilities. |
| Caves | | |

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| Management Direction for Recreation Resources | | |
|--|---------------|---|
| Type | Number | Direction Description |
| Standard | RC25 | Caves on the Forest shall be available for public recreation use except where prohibited or restricted by closure order. |
| Trails | | |
| Standard | RC28 | Damage to or loss of system trails from timber harvest, road construction, mining, special uses, or prescribed fire activities shall be repaired or mitigated by the program initiating or proposing the activity. |
| Standard | RC29 | If a trail is temporarily used as a road, relocate the trail for the duration of the project. |
| Standard | RC30 | Cross-country ski trails or routes are allowed and may be designated or groomed. Grooming by cooperators shall be approved on a case-by-case basis. |
| Guideline | RC31 | Log skidding and road construction should not cross trail corridors except at designated crossing sites or unless the trail is already located on a road. |
| Guideline | RC32 | Maintenance and/or relocation of existing trails should take priority over new trail construction. Trail maintenance priorities are as follows: a) Reduction of hazards to trail users. b) Prevention and mitigation of resource damage. c) Trail marking and signing. d) Treadway clearing work needed for user enjoyment. |
| Guideline | RC33 | Visual variety and scenic attractions should be integrated in determining new trail development or existing trail relocation. |
| Guideline | RC34 | The Forest may authorize construction and maintenance of special purpose trails, if use is compatible with Forest Plan direction, Management Prescription emphasis, and the suitability of terrain. |
| Guideline | RC35 | Established agreements with individuals or organizations to construct or maintain trails on the Forest should continue. New agreements should be considered on a case-by-case basis, and should be consistent with Forest Plan direction. |
| <p><i>See also Vegetation Goal VE01, Wildlife and Fish Goal WF03, Scenery Goal SM01, Heritage Resource Goal HR02, Range Goal RA01, Roads and Facilities Goals RF01, RF02, RF15; Soil and Water Standards SW41 and SW42, Vegetation Standards VE13 and VE22, TEP Species Standards TE15, TE16, TE17, TE21, TE24, TE51, TE56, TE61, TE65; Heritage Resources Standards HR05 and HR06, Timber Standard TR08, Range Standard RA16, Minerals Standards MG09, MG19, MG29, MG28, MG29, MG30, MG31, MG37; Lands and Special Uses Standard LS07, LS14, LS22; Soil and Water Guidelines SW26, SW48, SW49, SW55; Vegetation Guideline VE37, TEP Species Guideline TE74, Wildlife and Fish Guidelines WF17 and WF20, Scenery Guidelines SM05 and SM08, Heritage Resources Guideline HR12, Timber Guideline TR12, Range Guideline RA08, Lands and Special Uses Guidelines LS03, LS05, LS23; Roads and Facilities Guidelines RF11, RF12, RF19, RF20, RF21, RF22, RF23, RF24, RF29, RF32.</i></p> | | |

Scenery Management

Forest Service Manual direction for managing the scenic environment is in FSM 2380 - Landscape Management. Direction can also be found in the Scenery Management System (SMS) in Agriculture Handbook Number 701.

| Direction for Scenery Management | | |
|---|---------------|--|
| Type | Number | Direction Description |
| Guideline | SM02 | Favor the use of naturally occurring colors in the choice of finishes for constructed facilities. |
| Guideline | SM03 | Slope contouring should be used on road construction projects in areas of high visual sensitivity. |
| Guideline | SM04 | Reduce color contrasts of exposed soil within the time limit specified by the adopted scenic integrity objective. Use mulch, topsoil, seeding, and fertilizing as appropriate. |
| Guideline | SM05 | Road and trail structures—such as bridges, binwalls, and headwalls—should be designed to meet the Scenery Integrity Objective (SIO). |
| Guideline | SM06 | Favor retention of large trees and an unbroken forest canopy at Forest entrances |
| Guideline | SM07 | Utility corridors should be located to minimize visual impact. Where possible avoid areas with an SIO of high and very high.. |
| Guideline | SM08 | The SMS should be used to consider landscape character, scenic integrity levels, constituent information, and landscape visibility when inventorying or analyzing effects to the scenery and landscape aesthetics proposed by other management activities. The following matrix should be used to provide a compatibility comparison of the SIO and ROS classifications. |

See also Air Quality Goal AQ01, Fire Management Goal FM08, Vegetation Goal VE01, Range Goal RA01, Air Quality Standard AQ04, Fire Management Standard FM08, Timber Standard TR08, Minerals Standards MG08, MG13, MG15; Lands and Special Uses Standard LS25, Recreation Guidelines RC15 and RC33; Wild and Scenic Rivers Guideline WS04, Timber Guidelines TR12 and TR20, Range Guideline RA08, Minerals Guidelines MG25 and MG26, Lands and Special Uses Guidelines LS03, LS30, LS31; Roads and Facilities Guidelines RF13 and RF32.

ROS and SIO Matrix Guidelines

| ROS Class | Scenic Integrity Objectives | | | | |
|---------------------------------|-----------------------------|------------------|--------------|--------------|--------------|
| | Very High | High | Moderate | Low | Very Low |
| Primitive | Norm | Inconsistent | Unacceptable | Unacceptable | Unacceptable |
| Semi-Primitive Non-Motorized | Fully Compatible | Norm | Inconsistent | Unacceptable | Unacceptable |
| Semi-Primitive Motorized | Fully Compatible | Fully Compatible | Norm (1) | Inconsistent | Unacceptable |
| Roaded Natural | Fully Compatible | Norm | Norm | Norm (2) | Inconsistent |
| Rural | Fully | Fully | Norm | Norm (2) | Inconsistent |

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| | | | | | |
|-------|------------------|------------------|------------------|------------------|----------------|
| | Compatible | Compatible | | | (3) |
| Urban | Fully Compatible | Fully Compatible | Fully Compatible | Fully Compatible | Not Applicable |

1. Norm from sensitive roads and trails
2. Norm only in middle ground-concern level 2 (Mg-2) where a Roaded Modified subclass is used
3. Unacceptable in Roaded Natural and Rural where a Roaded Modified subclass is used. It may be the norm in a Roaded Modified subclass.

Wild and Scenic Rivers

Forest Service Handbook direction for managing eligible, suitable, and designated Wild and Scenic Rivers is in FSH 1909.12 - Land and Resource Management Planning, Chapter 8.2.

The following direction applies to eligible river segments. River corridors include the shorelines that generally extend a ¼ mile on either side of the eligible river segments. These segments are given a preliminary classification (Wild, Scenic, Recreational) based on varying levels of human activity. Rivers may be segmented into more than one classification.

| Management Direction for Wild and Scenic Rivers | | |
|--|---------------|--|
| Type | Number | Direction Description |
| Standard | WS03 | When management actions are proposed that may compromise the outstandingly remarkable value, classification, or free-flowing character of an eligible Wild and Scenic River segment, a suitability study shall be completed for that eligible river segment prior to initiating the actions. |
| Guideline | WS04 | The following Scenic Integrity Objectives should be assigned to the classifications of eligible Wild and Scenic River corridors: a) Very High to a Wild classification, b) High to a Scenic classification, c) Moderate or High to a Recreational classification. |

See also Minerals Standard MG36, Lands and Special Uses Guideline LS05.

Heritage Resources

Forest Service Manual management direction for the Heritage Program and cultural resources is in FSM 2360. Direction can also be found in the National Heritage Strategy.

| Management Direction for Heritage Resources | | |
|--|---------------|--|
| Type | Number | Direction Description |
| Standard | HR04 | Unevaluated heritage resources must be treated as eligible historic properties until evaluated. |
| Standard | HR05 | Projects shall be designed to avoid, minimize, or mitigate adverse effects to NRHP-eligible or unevaluated heritage resources. In-place protection of all identified eligible or unevaluated heritage resources is the minimum requirement. Heritage resources evaluated and determined not eligible for inclusion in the NRHP are afforded no such protection. |
| Standard | HR06 | Conduct heritage resources surveys in the Area of Potential Effect of federal undertakings unless such areas have already been surveyed in a manner consistent with current professional standards. Surveys must be conducted under the guidance of a professional archeologist. |
| Standard | HR07 | Review undertakings that may affect cultural resources to identify potential impacts. Compliance with Sections 106 and 110 of the National Historic Preservation Act of 1966, as amended, shall be completed before the responsible agency official signs the decision document. |
| Standard | HR08 | Develop mitigation measures for each unevaluated, NRHP-eligible, or NRHP-listed heritage resource where direct and/or indirect management-related effects are probable. |
| Standard | HR09 | Forest Service line officers shall stop ground-disturbing activities that impact or may impact known or newly-discovered heritage resources until the Forest Heritage Resources Program manager or qualified staff has made an on-site assessment of the resource and has completed appropriate cultural resources compliance. Heritage resources that have been evaluated and were determined not eligible for inclusion in the NRHP are afforded no such protection. |
| Guideline | HR10 | Heritage resource artifact collections and records, and administrative history and archival data, should be curated in accordance with federal standards, and through consultation with SHPO and other interested parties. |
| Guideline | HR11 | The eligibility of resources may be re-examined and changed if additional evidence or information about them becomes available. |
| Guideline | HR12 | Confer with other resource specialists in the earliest planning stages of projects involving ground disturbance, diminished jurisdiction, increased public use of, or increased access to, a heritage resource. |
| Guideline | HR13 | Criteria for interpretive suitability of sites, structures, and features of the built environment may include, but not be limited to: accessibility; property condition; protection considerations; compatibility with other resource activities or management prescriptions; and public interest or values. |
| Guideline | HR14 | A management plan should be developed for each historic property nominated to the NRHP. The plan should be drafted during the nomination process. |

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| Management Direction for Heritage Resources | | |
|--|---------------|--|
| Type | Number | Direction Description |
| Guideline | HR15 | Historic structures and features of the built environment may be removed if they are not identified for possible administrative use or interpretive theme, or if they pose a risk to health or safety. The level of documentation for such structures and features to be removed may vary with the condition, significance, and recommendations of the SHPO and the Advisory Council on Historic Preservation. |
| <i>See also Fire Management Standard FM12, TEP Species Standard TE10, Minerals Standard MG18, Lands and Special Uses Standard LS24, Lands and Special Uses Guideline LS05.</i> | | |

Timber Resources

Forest Service Manual and Handbook direction for timber management is in the FSM 2400 - Timber Management, and in Forest Service Handbooks: 2409.13 - Timber Resource Planning Handbook, 2409.13a - Timber Permanent Plot Handbook, 2409.15 - Timber Sale Administration Handbook, 2409.17 - Silvicultural Practices Handbook, 2509.18 - Soil Management Handbook, 2609.13 - Wildlife and Fisheries Program Management Handbook, and 2509.22 – Soil and Water Conservation Practices Handbook. Sale implementation direction can also be found in Timber Sale Contract Provisions and procurement contracts.

DESIRED CONDITIONS

| Management Direction for Timber Resources | | |
|--|---------------|---|
| Type | Number | Direction Description |
| Timber Resource Management Planning | | |
| Standard | TR05 | Whole-tree yarding shall be prohibited where site-specific soil inventories determine the need for on-site nutrient retention. Whole-tree yarding may be allowed elsewhere based on site-specific management objectives. |
| Standard | TR06 | No more than 20 percent of NFS lands within each prescription area unit shall receive regeneration harvest over a 10-year period. |
| Guideline | TR07 | Stands less than 10 acres in size should only be created to meet resource objectives other than timber production. Existing stands less than 10 acres should be maintained in the corporate database until such time that it is feasible to incorporate them with one or more adjoining stands. |
| Commercial Timber Sales | | |
| Standard | TR08 | Activity fuels (slash) shall be removed from permanent roads and recreation trails as part of normal harvest operations. Slash may be retained in wildlife openings if it is arranged into brush piles that would provide beneficial habitat structure without impeding wildlife movement and maintenance of openings. Slash may be retained in streams when considered beneficial for aquatic resources. |
| Guideline | TR09 | Skid trails should normally be a minimum of 200 feet apart, but may be closer to adjust to ground conditions. System roads should not be used for skidding. |

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| Management Direction for Timber Resources | | |
|---|---------------|---|
| Type | Number | Direction Description |
| Guideline | TR10 | System roads should not be used as log landings unless they are determined to be environmentally preferable and do not result in irreversible road damage. Within one growing season after completion of harvest activities, wildlife openings that are used as log landings should be rehabilitated using vegetation beneficial to wildlife. |
| Guideline | TR11 | Log landings, equipment storage areas, portable sawmill sites, and other concentrated activities should be located outside of channel buffers. |
| Guideline | TR12 | In and around developed recreation sites, activity fuel should be removed by chipping, burning, or other means, including opportunities for fuelwood gathering. |
| Guideline | TR13 | Minimize bole damage by reducing the number of skid trails and using “bumper trees”. |
| Other Than Commercial Sales | | |
| Standard | TR15 | Trees must be both dead <u>and</u> down for personal use firewood, except where determined by the Forest to be a risk to public safety or in designated areas covered by the guideline below. Cutters must have personal use firewood permits. |
| Guideline | TR16 | The Forest may make green firewood available to the public in designated areas. These areas should contribute to the accomplishment of resource management objectives. |
| Guideline | TR17 | Closed roads may be opened temporarily for firewood collecting, depending on management prescription direction and potential impacts to other resources. |
| Silvicultural Systems | | |
| Standard | TR18 | Regeneration harvest units shall be separated by manageable stands of trees. This spacing requirement applies to regeneration units until regenerated trees have reached 20 percent of the height of the surrounding vegetation. |
| Guideline | TR19 | Both even- and uneven-aged silviculture systems may be used to help meet management objectives. Base the choice of system and applicable harvest methods on the management prescription, the vegetation present, and/or the needs of other resources. |
| Guideline | TR20 | Harvest openings in the immediate foreground, foreground or midground of visually sensitive areas should be irregular, natural-appearing shapes and sizes to blend in with the landscape. |
| Reforestation and Timber Stand Improvement (TSI) | | |
| Standard | TR22 | An area shall be considered reforested when it meets the stocking and species requirements specified in the detailed silvicultural prescription for the site-specific area. |
| Guideline | TR23 | Sites should only be converted from one forest type to another (e.g. mixed hardwoods to red spruce or oak-hickory) as part of ecosystem restoration efforts. |
| Guideline | TR24 | Consider the needs of other appropriate resources when prescribing TSI activities. |
| Guideline | TR25 | Silvicultural operations should be identified during project planning in the detailed silvicultural prescriptions and scheduled in priority based on expected benefits and the objectives of the Management Prescription area. |
| Guideline | TR26 | Reforestation prescriptions should include the consideration of genetically improved planting stock as an alternative practice. |

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| Management Direction for Timber Resources | | |
|--|---------------|------------------------------|
| Type | Number | Direction Description |
| <i>See also Soil and Water Goal SW01, TEP Species Goal TE29, Scenery Goal SM01, Vegetation Objective VE02, Soil and Water Standards SW07, SW09, SW23, SW34, SW35, SW37, SW40; Vegetation Standards VE13 and VE22, TEP Species Standards TE23, TE24, TE30, TE31, TE32, TE33, TE35, TE36, TE37, TE58, TE59, TE67; Recreation Standards RC28 and RC29, Heritage Resource Standards HR05, HR06, HR09; Minerals Standard MG14, Fire Management M17, Vegetation Guideline VE04, Soil and Water Guidelines SW51 and SW52, TEP Species Guidelines TE40, TE76, TE77, TE80, TE81; Recreation Guidelines RC17 and RC31, Heritage Resources Guideline HR12, Minerals Guideline MG25, Lands and Special Uses Guideline LS10, Roads and Facilities Guidelines RF14 and RF15.</i> | | |

Lands and Special Uses

Forest Service Manual and Handbook management direction for the Lands program and non-recreation special uses is in FSM 2700 - Special Uses Management, FSM 5400 - Landownership, FSM 5500 - Landownership Title Management, FSM 7150 - Surveying, and FSM 7700 - Transportation System, and in FSH 2709.11 - Special Uses, FSH 2709.12 - Road Rights-of-Way Grants, FSH 2709.15 - Hydroelectric, FSH 5409.12 - Appraisal, FSH 5409.13 - Land Acquisition, FSH 5409.17 - Rights-of-Way Acquisition, and FSH 5509.11 - Title Claims, Sales, and Grants. See also the Recreation Resources section in this Chapter for additional direction for recreation special uses.

| Management Direction for Lands and Special Uses | | |
|--|---------------|--|
| Type | Number | Direction Description |
| Landownership Adjustments | | |
| Guideline | LS02 | Normally, condemnation should not be used to acquire an interest in land that the owner is not willing to sell. However, when an owner refuses to sell a needed interest in property, the Forest Supervisor may request condemnation action from the Secretary of Agriculture to clear defective title or to acquire high-priority property or rights-of-way needed for specific development programs. |
| Guideline | LS03 | Scenic easements may be obtained in lieu of fee acquisitions when practical and where management objectives are compatible. Generally scenic easements should serve some special area that is of exceptional value for outdoor recreation or critical habitat. |

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| Management Direction for Lands and Special Uses | | |
|--|---------------|---|
| Type | Number | Direction Description |
| Guideline | LS04 | <p>Federal land conveyances by exchange or other specific authority should be guided by the following criteria (not listed in any order of priority):</p> <ul style="list-style-type: none"> a) Lands inside or adjacent to communities or intensively developed private land, and chiefly valuable for non-National Forest System purposes. Lands that support community expansion. b) Parcels that will serve a greater public need in state, county, city, or other federal agency ownership. c) Inaccessible parcels isolated from other NFS lands. Parcels intermingled with private lands. d) Parcels under long-term special use permits whose use and purpose are not substantially consistent with National Forest purposes and character. e) Parcels having boundaries, or portions of boundaries, with inefficient configurations (projecting necks or long, narrow strips of land, etc.) Lands that support more logical and efficient management. f) Parcels eligible for disposition under the Small Tracts Act or other statutory authorities. g) Lands that do not have TEP or RFSS species habitat, wetlands, rare communities, or other outstanding resource values. <p>Exchanges should be advantageous to both parties. Avoid encumbering lands identified for exchange with uses that compromise land exchange opportunities.</p> |
| Guideline | LS05 | <p>Acquisitions of land and interests in lands should be guided by the following criteria:</p> <ul style="list-style-type: none"> a) Lands with water frontage such as lakes, rivers, and streams. b) Lands needed for protection of TEP fish, wildlife, or plant species. c) Other environmentally sensitive lands, such as important wetland and riparian areas and cave resources. d) Lands needed for protection of significant historical or cultural resources when these resources are threatened or when management may be enhanced by public ownership. e) Lands that enhance recreation opportunities, public access, and protection of aesthetic values. f) Lands needed for protection and management of administrative and congressionally designated areas. g) Lands needed to obtain more efficient land ownership patterns and reduce expenses of both the Forest Service and the public in administration and utilization. h) Lands with water rights or resources that can be used to accomplish management objectives or related resource obligations. i) Major corporate parcels that become available. j) Lands or partial interests needed to reunite or consolidate split estates. k) Lands or partial interests needed to achieve the objectives of public law or regulation. l) Lands needed to protect resource values by eliminating or reducing fire risks, soil erosion, or occupancy trespass. <p>Other acquisitions may be considered that promote more effective Forest management or benefit the priority acquisitions listed above.</p> |
| Rights-of-Way | | |
| Standard | LS07 | Easement acquisition shall conform to right-of-way planning and shall include existing Forest Transportation System roads and trails as well as project-related new construction. |

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| Management Direction for Lands and Special Uses | | |
|--|---------------|---|
| Type | Number | Direction Description |
| Guideline | LS08 | Rights-of-way for county roads, state highways, and major utility improvements should be conveyed when such conveyances are in the long-term interest of the Forest and the public. |
| Guideline | LS09 | Where feasible, exchange of easements, co-op agreements, and cost-share supplements should be considered as alternatives to purchase of rights-of-way. |
| Guideline | LS10 | Rights-of-way should be acquired at least one year prior to placing timber sale related or other activity Performance Accomplishment Reporting targets on annual Programs of Work if the accomplishments are dependent on the rights-of-way acquisition. |
| Boundaries | | |
| Standard | LS13 | Locate and post NFS land boundaries before implementing management activities near or adjacent to lands not under Forest Service management. |
| Standard | LS14 | Locate and post wilderness boundaries before implementing management activities that may conflict with nearby designated wilderness. |
| Standard | LS15 | Include protection measures for marked property boundaries and corners in authorizations, contracts, agreements, plans of operations, and internal management activities where the potential for disturbing property markers exists. Damage to or loss of marked property boundaries or corners shall be repaired by the appropriate party or management function. |
| Guideline | LS16 | Ownership boundary lines should be surveyed, marked, and posted according to the following priorities: a) Where known litigation is pending or a title claim has been asserted. b) Where significant resource values exist and utilization or manipulation of these resources are planned. c) Where encroachment activity by adjoining owners is suspected or known to exist or may occur in the near future. d) Where there is high risk for potential or planned outside development adjacent to NFS lands. e) All remaining property lines. |
| Special Uses | | |
| Standard | LS22 | Recreation residence Special Use permits shall not be approved. |
| Standard | LS23 | Special use permits shall not be issued for the sale or disposal/removal of topsoil. |
| Standard | LS24 | Require adequate bonds or other security instruments for special-use authorizations if the use has potential for disturbance that may require rehabilitation or when needed to ensure other performance. |
| Standard | LS25 | Proposals for utility and communication facilities outside existing sites or corridors shall be considered only after improvement or expansion of existing facilities is determined to be inadequate or impractical. |
| Standard | LS26 | Permittees who operate facilities on NFS lands shall meet the same environmental standards as those applied to Forest Service facilities. |
| Guideline | LS27 | Formation of user associations are preferred to individual special-use permits and rights-of-way in common use facilities, uses, or areas. Multiple permits to the same organization should be incorporated into one permit if this facilitates permit administration. |
| Guideline | LS28 | Modifications of existing authorizations should be prioritized based on the current and potential negative effects on human health and safety and resource values. |
| Guideline | LS29 | Access to authorized improvements for maintenance needs should be addressed as part of Special Use authorizations. Where appropriate access is not addressed in existing authorizations, the authorizations should be amended to include it. |

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| Management Direction for Lands and Special Uses | | |
|---|---------------|---|
| Type | Number | Direction Description |
| Guideline | LS30 | Utility corridor widths may be expanded beyond the minimum to achieve scenery and wildlife objectives. |
| Guideline | LS31 | New power lines, less than 34.5 KV, and telephone lines should be placed underground, unless analysis indicates this is not in the public interest, will cause excessive disturbance to other resources, or is impractical due to rocky or other prohibitive conditions. |
| Guideline | LS32 | Where feasible, special use rights-of-way on NFS lands should provide wildlife food and cover plants. Vegetation on rights-of-way may be selectively maintained to benefit wildlife and species diversity. The use or unintentional introduction of non-native invasive species should be aggressively avoided. |
| Guideline | LS33 | Fill, consisting of soil and rock materials (not including topsoil) should normally not be sold, disposed of, or removed from NFS lands, unless it is in the public interest. When circumstances warrant, however, fill may be sold or otherwise distributed under a minerals permit. |
| Guideline | LS34 | Commercial service developments and occupancy under permit may continue when in agreement with area objectives. New commercial development should not occur on NFS lands, unless the use of that land is necessary to provide high quality public services that are compatible with the area's objectives. |
| Guideline | LS35 | Authorization holders may be required to post a bond to cover future project costs of road decommissioning associated with new structures such as dams, towers, and large buildings. |
| Guideline | LS36 | Negative effects of special use practices or facilities should be mitigated, where feasible, through measures such as changes in management strategy or practices, discontinuance, relocation, closure, or alteration. |
| <p><i>See also Vegetation Goal VE15, Scenery Goal SM01, Vegetation Standards VE13, VE22, VE25, VE26; Soil and Water Standard SW34, TEP Species Standards TE16, TE36, TE45, TE63; Recreation Standard RC28, Heritage Resources Standards HR05 and HR06, Minerals Standard MG18, Roads and Facilities Standards RF04 and RF28, Soil and Water Guideline SW61, Vegetation Guideline VE21, Scenery Guideline SM07, Heritage Resources Guideline HR12, Range Guideline RA07.</i></p> | | |

Roads and Facilities

Forest Service Manual and Handbook management direction for facilities and roads is in FSM 5460 - Right-of-Way Acquisition, FSM 7100 - Engineering Operations, FSM 7300 - Buildings and Other Structures, FSM 7400 - Public Health and Pollution Control Facilities, FSM 7500 - Water Storage and Transmission, FSM 7600 - Electrical Engineering, and FSM 7700 - Transportation System; FSH 5409.17 - Rights-of-Way Acquisition, FSH 7309.11 - Buildings and Related Facilities, FSH 7409.11 - Sanitary Engineering and Public Health, FSH 7509.11 - Dams Management, FSH 7709.55 - Transportation Planning, FSH 7709.56 - Road Preconstruction, FSH 7709.56b - Transportation Structures, FSH 7709.57 - Road Construction, FSH 7709.58 - Transportation System Maintenance, and FSH 7709.59 - Transportation System Operations.

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| Management Direction For Roads and Facilities | | |
|--|---------------|---|
| Type | Number | Management Direction Description |
| Transportation Planning and Development | | |
| Goal | RF01 | Provide a transportation system that is safe, cost efficient, meets access needs, and minimizes adverse impacts to natural resources. |
| Standard | RF04 | Roads shall be constructed to the standard appropriate to their intended use, considering safety and other resource concerns. |
| Standard | RF05 | Cooperators or permittees may be allowed to locate, design, and build special purpose roads on NFS lands (i.e., mineral access or special land uses). The Forest shall review all such locations and designs, and approve them where appropriate. Location and standards shall be coordinated with the needs for management and for protection of other resources. |
| Standard | RF06 | New road construction shall avoid wetlands where feasible. If a wetland cannot be avoided, road construction may be allowed as long as the subsurface drainage patterns can be preserved and maintained. Any road that would cross a wetland shall cross in a way that minimizes disturbance to the wetland. |
| Standard | RF07 | Where new roads cross streams or high-risk areas, disturbed soils shall be stabilized and designed drainage structures shall be installed as soon as practical. High-risk areas include landslide prone areas, steep slopes, and highly erosive soils. |
| Guideline | RF08 | In support of road management decisions, use an interdisciplinary science-based roads analysis process such as Roads Analysis: Informing Decisions About Managing the National Forest Transportation System (USDA FS, 1999 Report FS-643). |
| Guideline | RF09 | Evaluate existing routes during transportation planning to determine whether they should be retained, reconstructed, replaced, or decommissioned. Evaluate transportation needs based on existing uses and condition, the access needs of cooperators, permittees, and private landowners, environmental and economic impacts, and compatibility with management prescriptions. Coordinate evaluation with information in the Roads Analysis Report for the Monongahela National Forest (January 2003) or updated versions. |
| Guideline | RF10 | During watershed or project-level analysis, opportunities for road decommissioning should be identified and prioritized based on: <ul style="list-style-type: none"> a) Hazard assessments in the Roads Analysis Report for the Monongahela National Forest (January 2003) or updated versions b) Identified needs in drainages with 303(d) impaired water bodies c) The access needs of cooperators, permittees, and private landowners d) Prescription units that exceed road density standards for the management prescription e) Other site-specific concerns identified in the watershed or project analyses. |
| Guideline | RF11 | The process to determine road maintenance levels should evaluate the purpose of the road, the type of vehicles expected, the duration and frequency of use, and necessary environmental protection measures. |
| Guideline | RF12 | Roads that are no longer needed for access or management should be decommissioned. Evaluate long-term access needs and potential trail conversion or linear wildlife opening opportunities prior to making a decision to decommission a road. |

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| Management Direction For Roads and Facilities | | |
|--|---------------|--|
| Type | Number | Management Direction Description |
| Guideline | RF13 | Road decommissioning should include the following: a) Road should be physically blocked to prevent vehicle use, unless designated for use by trail vehicles. b) Drainage structures should be removed and natural drainage re-established, unless needed for use by trail vehicles. c) The road profile should not normally be returned to contour during decommissioning, but recontouring may occur to meet special environmental or visual needs. d) Exposed soils should be revegetated and natural plant succession should be allowed to occur, unless needed for trail purposes. e) Decommissioning should normally be accomplished in conjunction with other project work but may occur independently if funding is available. |
| Guideline | RF14 | Temporary roads may be constructed and used to provide for short-term management access needs. |
| Standard | RF15 | Temporary roads shall be rehabilitated and returned to productivity following their use. |
| Guideline | RF16 | Work with intermingled and adjacent landowners and local governments to develop roads or road systems that serve the needs of all parties. |
| Transportation System Operation | | |
| Standard | RF19 | Public motorized vehicle use is allowed on roads and trails designated open for use. Off road or trail use is not allowed. Off road motor vehicle travel restrictions do not apply to: 1) military, fire, emergency, law enforcement or administrative vehicles when used for official or emergency purposes, and 2) other vehicle use allowed by written authorization from the Forest Supervisor or District Ranger. |
| Guideline | RF20 | Vehicle use on closed roads by permittees, contractors, or other cooperators may be authorized to conduct official business or to perform resource management activities. |
| Guideline | RF21 | The Forest may allow others to plow snow on Forest System roads if the plowing follows Forest Service Engineering Specifications. |
| Guideline | RF22 | Use the Forest Motor Vehicle Use Map to identify whether a National Forest System road or trail is open, restricted, or closed to motor vehicle use. |
| Guideline | RF23 | Seasonal or year-round road closures may be used to: a) Reduce road maintenance costs. b) Minimize user conflicts. c) Provide for recreation activities. d) Enhance wildlife habitat. e) Reduce road use impacts to other resources. f) Address public safety. |
| Guideline | RF24 | Road and trail management direction should be reviewed on a case-by-case basis as public issues or management concerns are identified for a specific road or trail. District Rangers should prepare an environmental analysis addressing issues and concerns to determine if a change in management direction is needed. |
| Guideline | RF25 | Information should be made available to the public to communicate specific management decisions about public motor vehicle use on Forest system roads and trails. |
| Facilities | | |
| Standard | RF29 | Ensure that potable water provided at any public or administrative facility is safe to drink. |

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| Management Direction For Roads and Facilities | | |
|---|---------------|--|
| Type | Number | Management Direction Description |
| Guideline | RF30 | Building and structure architectural designs should follow principles and concepts outlined in the Built Environment Image Guide (BEIG) or other appropriate guide. |
| Highland Scenic Highway | | |
| Standard | RF31 | Commercial traffic may only be allowed on the Parkway portion of the Highland Scenic Highway by written permission under one of the following conditions: a) The proposed use is advantageous for reasons of public safety, environmental protection, or resource management objectives. b) The proposed use is related to the construction, maintenance, or management of the Parkway, associated facilities, or the highway corridor. c) The proposed user has a legal right of access through deed, easement, or permit. |
| Guideline | RF32 | Related recreation facilities and visual enhancement projects should be included in Highland Scenic Highway plans and projects. |
| <p><i>See also Soil and Water Goals SW32 and SW33, Recreation Goals RC01, RC05, RC07, RC11, RC12; Lands and Special Uses Goal LS06, Recreation Objective RC13, Soil and Water Standards SW04, SW34, SW35, SW36, SW37, SW44, SW45, SW46; Vegetation Standards VE13, VE2, VE22; TEP Standards TE21, TE51, TE56, TE67, TE71; Recreation Standards RC18, RC20, RC28; Heritage Resources Standards HR05, HR06, HR09; Timber Standard TR08, Minerals Standards MG09, MG13, MG35; Lands and Special Uses Standard LS07, Soil and Water Guidelines SW11, SW14, SW19, SW51, SW60, SW62; TEP Species Guidelines TE74, TE76, TE77, TE81, TE83; Wildlife and Fish Guidelines WF17, WF19, WF20; Recreation Guidelines RC29 and RC31; Scenery Guidelines SM02, SM03, SM05; Heritage Resources Guideline HR12, Timber Guidelines TR10, TR11, TR17, TR18; Lands and Special Uses Guidelines LS07, LS08, LS09, SL10, LS28, LS37.</i></p> | | |

**MANAGEMENT PRESCRIPTION STANDARDS AND GUIDELINES
Management Prescription 3.0 – Vegetation Diversity**

| Management Direction for 3.0 – Vegetation Diversity Emphasis | | |
|---|---------------|---|
| Type | Number | Direction Description |
| 2200 – Range | | |
| Standard | 3003 | Management of open areas within allotments shall be primarily for livestock grazing. Intensive management for livestock grazing may occur. |
| 2350 - General Forest Environment Areas | | |
| Standard | 3005 | Selected areas, trails, or roads may be closed, where appropriate, to motorized vehicles during specific periods to protect resources, provide for public safety, or reduce user conflict. The intent, however, is to provide for public motorized use. |
| 2410 - Timber Resource Management Planning | | |
| Standard | 3006 | There is no limit on the timing or proportion of the prescription area to be entered for timber practices during an entry cycle. |
| Guideline | 3007 | Management with uneven-aged silviculture systems should be based on visual quality, timber products, economics, and site and species capabilities. |
| Guideline | 3008 | The following maximum diameter at breast height (dbh) sizes should be used as guidelines as to when mature trees should be harvested under the uneven-aged |

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| Management Direction for 3.0 – Vegetation Diversity Emphasis | | | | | | | | | | | | | | |
|---|-------------------------|--|--------------------|-------------------------|--------------------------|-----------|-----|-----|----------|-----|-----|------------|-----|-----|
| Type | Number | Direction Description | | | | | | | | | | | | |
| | | silvicultural system. <table border="1"> <thead> <tr> <th>Forest Type</th> <th>Low Quality Site</th> <th>High Quality Site</th> </tr> </thead> <tbody> <tr> <td>Hardwoods</td> <td>22”</td> <td>28”</td> </tr> <tr> <td>Conifers</td> <td>16”</td> <td>22”</td> </tr> <tr> <td>Oak - Pine</td> <td>20”</td> <td>24”</td> </tr> </tbody> </table> | Forest Type | Low Quality Site | High Quality Site | Hardwoods | 22” | 28” | Conifers | 16” | 22” | Oak - Pine | 20” | 24” |
| Forest Type | Low Quality Site | High Quality Site | | | | | | | | | | | | |
| Hardwoods | 22” | 28” | | | | | | | | | | | | |
| Conifers | 16” | 22” | | | | | | | | | | | | |
| Oak - Pine | 20” | 24” | | | | | | | | | | | | |
| 2470 - Silvicultural Systems | | | | | | | | | | | | | | |
| Guideline | 3009 | Use even-aged management when shade-intolerant vegetation is the species objective or when needed for accomplishing diversity objectives. a) Clearcutting with reserve trees is the normal regeneration cutting method to achieve these objectives. Significant exceptions include: 1) Shelterwood may be used when needed for regeneration of a particular species, or visual resource management objectives. 2) Deferred rotation (two-age) cutting may be used to retain large trees well into the next rotation. b) Thinning is a normal practice, particularly on better quality sites. | | | | | | | | | | | | |
| Guideline | 3010 | Uneven-aged management should be used when shade-tolerant vegetation is the objective, or when needed to meet scenic integrity objectives. Group selection cuts should be limited to two acres or less. | | | | | | | | | | | | |
| 2470 - Timber Stand Improvement and Reforestation | | | | | | | | | | | | | | |
| Guideline | 3011 | Healthy trees should be retained in and around developed recreation areas. Timber stand improvement should favor long-lived trees with healthy crowns, flowering trees, vegetation for screening or other objectives of a site-specific vegetation management plan. | | | | | | | | | | | | |
| 2630 – Wildlife Habitat | | | | | | | | | | | | | | |
| Guideline | 3014 | Conifer species may be planted or controlled where needed to enhance vegetative diversity for wildlife. | | | | | | | | | | | | |
| 7100 - Transportation System Planning | | | | | | | | | | | | | | |
| Guideline | 3016 | New road construction should not cause road density within the prescription area unit to exceed 1.0 mile per square mile for collector roads, or 4.0 miles per square mile for any combination of collector and local roads. | | | | | | | | | | | | |
| 7730 – Transportation System Operation | | | | | | | | | | | | | | |
| Guideline | 3017 | Public motorized vehicle access and use is compatible with this Management Prescription. | | | | | | | | | | | | |

Design Criteria

Soil and Water

Savannahs will be limed, fertilized and seeded immediately upon their creation.

A temporary bridge will be utilized to access Unit 9 in alternatives where conventional logging is proposed.

Limit the harvesting to approximately half of the volume in the North Cove area in the first period. After harvesting reaches the first half of volume removed, then allow two

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growing seasons to pass before allowing the rest of the harvest. Split the harvest into two entries (rather than 3).

- Skid roads and log landings are to be located to minimize soil and stream buffer disturbance, avoid or limit the number of functioning stream channel crossings, utilize existing old skid routes where desirable, and avoid the steeper and wetter areas within the units and areas of disturbance to the maximum extent practical. Blading skid roads in wet soils should be held to cuts less than 18 inches deep in the soil profile as much as possible.
- In order to avoid or reduce the construction of bladed skid roads, overland skidding shall be used wherever practical, especially in those areas with more gentle terrain when soil and wetness conditions will support it.

Winter season activities in ground-based yarding (skidding) harvest units should only be authorized after an interdisciplinary review of the affected areas, to include an assessment of soil and water resource concerns and risks. (*Ref. SW09, p. II-10*)

Signs and flaggers would be used to warn and/or stop traffic when helicopter flights are near open public roads or private roads used by landowners. (*Ref. RF-25, p. II-56*)

Vegetation

The following design criteria apply to plantings of American chestnut and butternut:

- Butternut and/or American chestnut trees should be interplanted to enhance diversity in regeneration harvest units, (clearcuts with residuals).
- Butternut and/or American chestnut seeds or seedlings should be planted in open areas within harvest units (Ideally, about 100 feet from the base of any tall reserve tree.)
- The plantings should be scattered in 6 to 10 of the harvest units.
- Planting stock for American chestnut should be as close to native American chestnut as available at the time of planting. The intent is to plant strains that are resistant to the chestnut blight and to enhance the native genetic diversity of the area. Butternut planting stock should be native butternut.
- Tree tubes, fertilizer and herbicide may be used at individual tree planting locations for the butternut and American chestnut plantings. This will enhance the ability of these trees to compete with natural seedlings and become a codominant part of the stand. (*Ref. TR26, p. II-41*)

Ecology/Botany

Native Plants: All seeding for soil stabilization, savanna maintenance, etc. should use a site-appropriate mix of native grasses and/or forbs. A cover/nurse crop should be included in the mix to insure adequate soil stabilization while the native grasses and forbs

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become established. The cover/nurse crop does not have to be native as long as it is not invasive. (*Ref. VE06, p. II-18*)

Rare Communities: The following design criteria apply to seeps and other wetlands:

- Maintain leave clumps in and immediately adjacent to seeps and other wetlands. Specific locations of seeps and wetlands are not known at this time; however, if any are encountered during sale layout, they should be protected in this manner.
- Avoid dragging logs through seeps and piling slash in seeps.
- Consider seep location in skid trail layout. Avoid seeps to the extent possible. Essential crossings should be at right angles and should keep cut and fill to a minimum to minimize damage to seeps. (*Ref. SW51, p. II-13*)

The following design criteria apply to rock outcrops:

- Locate skid trails, roads, landings, cable routes, etc. such that they do not impact major outcrops. (*Ref. VE14, p. II-19*)

Non-native Invasive Plants:

- Infestations of garlic mustard, Japanese stiltgrass, and Japanese knotweed must be controlled to limit potential spread by timber harvest and road construction. Ongoing control and monitoring will be necessary before, during, and after timber harvest and road construction activities, until infested areas are shown to be free of these species for three consecutive growing seasons. See the Appendix for control methods to be used.
- If any on-Forest sources for gravel or borrow material are used, they should be inspected prior to use to insure that they are free of NNIS plant material.
- Ideally, all seed mixtures used for soil stabilization, savanna maintenance, etc. should be certified weed-free. However, there is a good possibility that certified seed will not be available. In this case the seed vendor's test results for noxious weed content should accompany the seed shipment and should demonstrate that the seed is substantially free from noxious weed seeds.
- Before entering National Forest land, all logging equipment, construction equipment, and other vehicles must be free of all soil, seeds, vegetative matter, or other debris that could contain or hold seeds. Equipment and vehicles that are used in the project area must be washed thoroughly before being moved to any other area of National Forest land. Vehicle and equipment washing should not be conducted on National Forest land. (*Ref. VE20 through VE24, pp. II-19 through II-20*)