

Guidelines for Managing West Virginia's Seven State Forests



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PREFACE

These guidelines for managing seven State-owned forests (State Forests) were prepared by the West Virginia Division of Forestry. Formal, salient advice was solicited, received, and incorporated into the guidelines by the West Virginia Forest Management Review Commission (FMRC). The FMRC will review the Guidelines at least every five years.

Public input will be received and pertinent comments incorporated as management plans and prescriptions are prepared for each of the State Forests.

This document will serve as the standard by which the following seven State Forests are managed: Cabwaylingo, Calvin Price, Camp Creek, Coopers Rock, Greenbrier, Kumbrabow, and Seneca. This document may be reviewed at the Charleston office of the Division of Forestry (DOF) and at each of the three DOF Regional Offices, or on the DOF website (www.wvforestry.com).

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GUIDELINES FOR MANAGING WEST VIRGINIA'S SEVEN STATE FORESTS

I. MISSION

West Virginia Code §19-1A-1 "The Legislature further finds that the state forests are an important resource for silviculture and scientific research, developed and undeveloped outdoor recreation; propagation of forest trees, fish and wildlife; wildlife and fisheries management; aesthetic preservation; hunting and fishing; timber production; and demonstration of state-of-the-art forestry management and therefore should be managed on a multiple-use basis." It is the policy of the Division of Forestry to manage each state-owned forest for multiple benefits while guarding that our actions are ecologically responsible and economically viable.

The mission of the W.Va. Division of Forestry is to protect and manage all West Virginia forest land resources through partnerships emphasizing a stewardship ethic. Forests provide a multitude of benefits and are a source of emotional, spiritual, and financial well-being for the population in general. These benefits have tangible and intangible values. It has been said that the quality of life for modern man is in direct proportion to the health, quality and abundance of the forest resource.

Recognized benefits attributable to the seven state-owned forests originate with the ecological communities which make up each forest. Not all uses can be met on each state forest or on every acre; however, other potential uses will be considered when setting management objectives system wide.

The attributes of an area will influence decisions for change, if any that would occur in the area. However, prescriptions will be designed for specific species of wildlife and plants and recreational opportunities within the forest.

The Division's goal is to meet the needs of the present without compromising the future. It is through public involvement, interagency cooperation, the practice of silviculture, and the implementation of a natural resources stewardship ethic that the Division of Forestry satisfies its legislative mandate to serve the many needs of various user interests.

II. GOALS

Based on the aforementioned mission, the following are the goals for State Forest resource management:

1. Manage the forest ecosystem and its resources such as clean water, aesthetics, wildlife, soils, and recreation through a planning system which involves interagency cooperation and public involvement.
2. Provide abundant and diverse wildlife habitat.
3. Provide intensive and extensive recreational opportunities commensurate with the resource base.
4. Provide multiple forest resource products.
5. Demonstrate sound forest resource management practices so as to sustain and improve the overall health, productivity, and quality of the forest resources.
6. Protect, maintain, and actively manage environments for rare, threatened, and endangered species of flora and fauna.
7. Provide areas for research for the management of forest-based resources. (The most intensive forest research is conducted on the 7,205 acre University Forest, the northern portion of the Coopers Rock State Forest).
8. Protect the forest resource from fire, insects and disease, and other destructive influences so as to maintain the overall health of the forest.
9. Demonstrate sound forestry concepts through public education.

III. POLICY

A. PUBLIC INPUT ON EACH STATE FOREST MANAGEMENT PLAN

The Division of Forestry recognizes the value of public input regarding the management of State-owned Forests. Therefore, the following guidelines will be adhered to regarding public input for management planning purposes:

- Management plan drafts will be developed for each of the seven State Forests managed by the Division of Forestry under the guidance and using input from the Forest Management Review Commission.
- Management plan comments will be solicited from the Division of Natural Resources Wildlife Resources and Parks and Recreation sections.
- The availability of a final draft of each plan will be advertised in a local newspaper with a large circulation (twice over a two-week period) and on the Secretary of State's website. Included will be advertised times, dates, and locations to review the plan.
- Copies of the draft plan will be made available from the DOF website and the State Lands Manager.
- A public meeting will be conducted by the Division of Forestry between 30 and 40 days, from the date of the second newspaper advertisement. The public meeting will be conducted either on the state forest to be reviewed or within the vicinity of that forest. A response to comments will be made by the Division of Forestry. The record for written comment will remain open for 10 working days following the meeting.
- The DOF Director will prepare and send to the commenters and those requesting such a "Report of Response" on all written comments within 90 days from the public meeting.
- The written comments and the Director's "Report of Response" will be retained on file at the local Regional office for one year.
- A final 10-year plan of management for each State Forest will be developed and implemented within 120 days from the date of the public meeting.
- The State Forest Management Plan will be revised and updated 10 years from the date of approval, provided all projects in the expired plan have been completed.

- Amendments deemed necessary to meet the mission and goals of the State Forest Management Plan may be recommended by the Director of the Division of Forestry anytime during the 10-year interim subject to consultation with the Forest Management Review Commission.

B. PUBLIC INPUT ON STATE FOREST MANAGEMENT PRESCRIPTIONS

- Using the latest forest inventory the Division of Forestry will propose management prescriptions for specific areas of a particular forest.
 - The Division of Forestry will reinventory the forest resource prior to developing a prescription.
 - An inventory summary and management prescription for the area will be prepared and submitted to the Parks and Recreation Section and the Wildlife Resources Section of the Division of Natural Resources for review and comment.
 - Comments, information, and future concerns received from the cooperating agencies will be considered during preparation of the prescription.
 - When a prescription is prepared for an area of ten acres or more, it will be advertised twice in a two consecutive-week period in at least one local newspaper, as well as on the Secretary of State's Online meetings Notice Database. A statewide news release and posting on the DOF website and other social media will also serve as a notice of the prepared prescription. Local officials, such as county commissioners, will also be notified by email or mail. The time and place for a public tour of the prescription area will also be listed in these advertisements.
 - Within three weeks after the second announcement, a public presentation and public tour of the proposed treatment area will be held.
- It is requested that persons planning to attend the public tour sign up by phone, email or in writing five calendar days prior to the tour so that proper accommodations and transportation arrangements may be made. If no one signs up five days prior, then the DOF will not be required to hold the tour. If a person has signed up for the tour, drop-ins will be welcome. If interest is expressed in an alternative tour date, the DOF will try to accommodate the request.

- Written or online comments will be received by the State Lands Manager for fourteen calendar days following the tour date.
- The written comments must be signed and include a return address of the person or persons commenting.
- The State Lands Manager will receive and Division of Forestry personnel will review and consider the written comments.
- The State Lands Manager will prepare a response to the comments and a "Report of Response" will be sent and/or posted online.
- The Director will provide final approval based on the review of all input.
- Upon the Director's approval, the final management prescriptions will be implemented.
- Prescription for forest areas devastated or with significant damage by injurious agents such as wildfire, storm, insects and/or disease will be exempt from this public input procedure. Emergency salvage measures will prevail in order to expedite the response.

C. STATE FOREST REVENUE

The monies derived from the sale of all forest products shall go into a Special Revenue Account and used in accordance with the provisions of W.Va. Code §19-1A-3. As is customary, up to 25 percent of the revenue generated from the sale of forest products on State Forests is returned to the State Forest system for the enhancement of the overall forest environment, including recreation, wildlife resources, conservation education, forest fire prevention, and watershed protection. Nevertheless, the provisions of W.Va. Code §19-1A-3 govern the expenditure of funds derived for the sale of timber.

D. SOIL AND WATER QUALITY

Stabilizing forest soils assures good water quality. Construction and maintenance of roads and trails shall be in keeping with stringent Best Management Practices. Only necessary roads and trails will be developed.

E. THREATENED AND ENDANGERED SPECIES POLICY

Special care will be given to protect and enhance the habitats of such species present. Division of Forestry in coordination with DNR's Wildlife Resources Section will develop a list of threatened and endangered species (as listed under the Federal ESA act) in each forest. Consideration will be given to unique species and habitats when found.

F. WETLANDS AND RIPARIAN AREAS

Seeps and low-lying moist areas will be protected. All major streams will be protected by a 100-foot riparian buffer zone which will be no-cut or very limited cut areas. The use of heavy equipment in this zone is limited to an approved crossing. This policy is designed to give maximum protection to water quality both by keeping the water temperature down and sedimentation to a minimum. Culverts and bridges will be used to cross perennial streams.

G. PESTICIDES

The Division of Forestry will follow the Department of Agriculture's policy on the limitations, safe use, and application of all pesticides.

H. OTHER CONSIDERATIONS

The Division of Forestry will also follow state and federal regulations with regard to forest management and prescriptions on cultural heritage or archeological sites.

IV. DESIRED FUTURE CONDITIONS

The planning process for a forest must focus on the goals of the management. The management goals, when viewed from the forest-wide perspective, have become known as the "desired future condition."

The Division of Forestry's objective is to enhance sustainability of species diversity and forest health over time while providing for other uses. Management activities will consider the relationship between organisms and the environment. Many current silvicultural practices help maintain landscape diversity. It is expected that the majority of the forested acres within the forest shall continue to support sawtimber stand ages of 60-150 years and diameters of 16"-24" DBH with volumes expected to be from

2,400 bd. ft./ac. to 6,000 bd. ft./acre International 1/4" tree scale. These forests are also expected to support populations of turkey, ruffed grouse, squirrels, raccoons, white-tailed deer, cottontail rabbits, bobcats, foxes and black bears. Songbirds, small mammals, reptiles, amphibians, and insects will also be supported by the forest habitat.

The maximum life expectancy for the common forest species in West Virginia is 80 to 300 years. The productivity and health of a working forest can best be maintained with 80 to 150 year rotations, depending on site and tree species. Due to the lack of young forest habitat and the subsequent decline of species that depend on the habitat, more work will be done to provide for this habitat, mostly in smaller patches. In order to maintain the diversity of tree species, management methods that provide conditions for regeneration of these species must be incorporated where feasible.

By considering inventory data and the values of other forest resources, a stand's suitability for harvest will be determined. This will be determined by first conducting a current inventory of the forest resource. The timber-related inventory data will be applied to the Gingrich stand and stock tables (See Appendix). In regard to the timber resource, to be considered for harvest there should be a minimum of 3,000 bd. ft./ac. International 1/4" tree scale, available for harvest. Should an area not meet expectations, the prescription might be to take no action for a specified number of years. Changes in market conditions might cause the postponement of a harvest even if it meets the minimum available cut standards. The impact of the prescribed treatment on the other forest resources and uses will be weighed and the treatment adjusted, if needed, before it is implemented.

Stand densities vary throughout the forest. Some areas may be understocked and are therefore candidate areas for tree planting or protection of seedlings by use of tree shelters. They may be deemed suitable for site preparation work, or recommended to be left alone. Decisions are made on a case-by-case basis as these areas are evaluated. Current management goals intend to bring these stands to the following levels. In oak-hickory or northern hardwood stands, the Division works toward density levels of from 65-85 sq. ft./ac. of basal area; cove hardwoods and high value sites, basal areas of from 80-110 sq. ft./ac. are appropriate; white pine or red spruce stands 100-130 sq. ft./ac. becomes the target level. These densities will place the stand in the fully stocked condition.

In areas that historically had one type of dominant cover, but have since grown up in another type, a stand conversion back to the original may be attempted. This may mean converting from hardwoods to conifers or from shade-tolerant species to shade-intolerant species. The guiding factor will be to determine, in advance, which species or group of species is most desirable for a given site.

V. SPECIAL TREATMENT AREAS

Not every acre of the forest will or should produce timber crops. Special treatment areas will be designated when identified. Some of these areas have already been designated around residences and recreation facilities. Trails and scenic overlooks also receive special attention when management prescriptions are made. Other special treatment areas include streams, wetlands, riparian zones, unstable slopes, research areas, and designated old growth areas.

The process of moving from the current condition of the forest to the desired future condition will be accomplished by establishing management prescriptions. The prescriptions will address wildlife, water, recreation, aesthetic and timber management along with the maintenance or creation of diversity and the suitability and compatibility of actions that will benefit the landscape both on the forest and areas adjacent to it. The following procedures cover the prescription development process:

1. **Recommended available volume:** For sawtimber, 3,000 board feet (MBF) per acre is considered the minimum volume that is currently economically feasible to harvest on these forests.
2. **Special Value Areas:** The following guidelines will be used:
 - a. **Trails, roads:** Hazardous trees will be cut for a distance of 50 feet on either side of a designated hiking trail or public road and a light selection cutting for the next 100 feet. However, roads and trails created by planned timber harvesting in the working forest are not subject to the establishment of buffer zones during subsequent harvests, as are designated hiking trails established and maintained for recreational purposes alone and specified in the management plans for individual forests. The selection of hazardous trees along trails or other recreational areas will only be at the specific recommendation of the Forest Superintendent.
 - b. **Streams, Wetlands and Riparian Zones:** Any harvesting operations or other forest management activities, including road building, that occur near streams, wetlands or riparian zones are conducted with extreme caution. These areas are frequently critical zones for wildlife and may be used more extensively by a greater variety of wildlife than any other. Streams include those that are permanent and those that are intermittent (wet weather). No-cut buffer strips or only very light selection cuts are planned along perennial streams. Wetland and riparian zones vary markedly in the amount and type of vegetation present. Wetlands can be predominantly forested, occupied by shrubs and grasses or even have emergent or aquatic beds.

There are more than 200 different species of birds, mammals, reptiles, and amphibians in the eastern United States that to some extent depend on wetlands for habitat. Forest riparian zones along streams provide migration routes for some wildlife species and may, in some areas, be the only preferred habitat available to certain others. Therefore, no cutting or only carefully planned minimal selection cuts are prescribed within a 100-foot buffer zone maintained around these areas. Heavy equipment is only permitted in approved crossing areas. Designation of these areas will be coordinated with the cooperating management agencies prior to any harvest prescription development.

c. **Overlooks:** Consideration of the vista will be given when recommending even-age management or when silvicultural treatments are to occur. Selection and development of these areas will be coordinated with the Forest Superintendent prior to harvest prescription development.

d. **Excluded areas:** These areas will be managed according to respective needs. This will include areas deemed to be highly sensitive. The designation, development and maintenance of these areas will be coordinated with the other managing agencies.

3. **Threatened and Endangered Species**

Although very few occur in West Virginia, there are some species of West Virginia plants and animals that have been placed on the U.S. Fish and Wildlife Service list of "Threatened or Endangered Species" in accordance with the Federal Endangered Species Act of 1973. The U.S. Fish and Wildlife Service and the West Virginia Division of Natural Resources are the agencies responsible for protecting these species in West Virginia. A list of endangered and threatened species along with some habitat needs of the endangered animals in West Virginia are included all State Forest Plan appendices.

4. **Planned Treatment**

Prior to work being done on any designated area, a complete prescription will be prepared outlining the treatment to be carried out on the area. The prescription will address wildlife, water, recreation, aesthetics and timber management, along with the maintenance or creation of diversity.

VI. PRESCRIPTIONS

Areas selected for prescriptions will first be inventoried to determine the present condition. The resources inventoried include water; recreation; wildlife; timber; rare, threatened and endangered species; and invasive and competing vegetation. Part of the inventory procedure includes contacting the Wildlife Resources Section and the

Parks and Recreation Section of the Division of Natural Resources. These agencies will provide information pertinent to the area.

The prescription process usually requires one or more years from initiation to application. During this process, the following are taken into account: the demands of the market, manpower restrictions, budgetary restraints, biological processes, public opinion, and the needs of endangered species.

In the case of a harvest recommendation, diameter limits and guidelines for species to be harvested are included in the prescription along with number of den trees to be left per acre, health of trees to be left, mast producing capabilities of trees left, size of buffer zones around seeps and wetland, and special use areas and other unique areas.

Prior to conducting a timber harvest, a legal advertisement describing the timber for sale and the harvest acreage is published in newspapers that serve the area. All agencies with an expressed interest in the sale also receive a prospectus. Following the mailing of the prospectus, a tour of the sale area is conducted. As specific silvicultural prescriptions are developed they will be added to the appropriate State Forest plan. Additionally, all proposed timber sales will conform to the Division of Forestry's policy "Public Input on State Forest Management Prescriptions."

VII. GENERAL MANAGEMENT PLANNING

The Division of Forestry's intent for State Forest management is to provide suitable conditions for the establishment and maintenance of a healthy forest, to provide suitable habitats for varied wildlife resources, to protect and preserve watersheds and water quality, to provide appropriate recreational opportunities, and to maintain aesthetic qualities while producing forest products on a sustainable basis.

The above-stated intent is considered multiple-use management. This approach to working with the natural cycles of the forest, to nurture and maintain a healthy and diverse environment, fulfills the duties and responsibilities mandated by State law. Through proper management a healthy, vigorous forest can be maintained for commercial as well as other forest uses.

One of the mandates for State Forests is the demonstration of forestry. In complying with this responsibility, all of the areas of the forest that have been given silvicultural treatments serve as tools for educating the general public and others in the

practice of forestry. New management techniques and forestry practices are developed and tested as part of the Division's mandate.

Silviculture is the science foresters use in working with the natural cycles of the forest. The nature of the forest, as a group of living organisms, is to grow and change. Silvicultural practices, including prescribed harvesting, delineation of no-harvest areas, delineation of special treatment areas, and no-treatment areas contribute to the general diversity of the forest resources. Canopy openings stimulate the growth of herbs, shrubs and seedlings, and increase vertical layering. The harvesting of different stands of the forest at various times creates a mosaic of habitats.

In the process of fulfilling management goals, prescriptions will be developed for approximately 51,000 acres, the "working forest." The total area of State Forest, managed by the Division of Forestry is 63,031 acres. Each prescribed treatment will be the result of an evaluation of the unit to include its present condition, the desired future condition, and the practices best suited to attain the desired goal.

These prescribed treatments can be grouped into either harvest and regeneration practices or stand improvement practices. Generally these treatments can fulfill both purposes. Reproduction treatments are divided into even-aged or uneven-aged. An even-age stand is one where the difference between the oldest and the youngest trees in the stand is no more than 20% of the length of the rotation. The rotation age of a forest stand is the time from establishment to a specified harvest age (biological or economical). If a condition other than the above exists, the stand is considered uneven-aged.

No prescription for a stand shall be considered permanent or unalterable prior to implementation. Examples and descriptions of various practices are included in this plan for reference purposes only. (See Appendix for silvicultural treatments.)

Currently some 5,000 acres (8%) of the total state forest system (63,031 acres) has been designated to become old growth and/or mature forest so as to create this unique habitat, thus adding to the overall diversity of the forest. The majority of this acreage is contained in the 100-foot wide riparian areas, wildlife protection areas, sensitive areas, improved recreation areas and recreation buffer areas. These are some of the unique sites for plants and also give good protection to the streams. The amount of working forest in relation to the total forest may increase or decrease as specific prescriptions are implemented or to address catastrophic situations.

When each prescription is developed, consideration will be given to its impact on the entire forest. The concept of how one action causes a reaction within the forest

system is monitored to sustain the ecological health of the landscape. In order to maximize opportunities for the flora and fauna of the forest, as well as mankind, a goal of the Division of Forestry is to enhance and maintain biodiversity. The goal is to maintain varying populations distributed throughout a range of conditions.

The Division of Forestry recognizes that silvicultural techniques used in publicly owned forests held in trust for all the people of the state may differ from silvicultural techniques used in commercial timber tracts held by private landowners. Clear-cutting will not be used in state forests as a means of maximizing timber production or revenues from timber production, but may be used to develop wildlife food habitat (as recommended by the Wildlife Resources Section), for research, for the salvage of trees damaged by storm, fire, insect, disease or other natural occurrence or to regenerate species of trees that need full sun to sprout and grow.

The Division of Forestry was assigned a specific and purposeful mandate for the management of the State Forests (See Mission Statement).

The following emphasizes the West Virginia Division of Forestry's role:

- 1) Manage W.Va.'s State Forests to enhance their features and provide multiple public benefits that include, but are not limited to, aesthetics, continuous harvests of forest products, recreational opportunities, soil stabilization, improve water quality where possible, and wildlife habitat.
- 2) Provide stewardship-oriented management demonstration and encourage the implementation of BMPs.

In line with the multiple-use concept, State Forest resource management is based on the following philosophies:

- The more diverse State Forests can become in flora and fauna, the more productive they will be in providing multiple uses; in addition, there will be greater opportunities for different management options and strategies and ultimately, greater benefit to public users.
- Although an individual forest acre can provide multiple outputs, it is difficult to achieve an optimum mix of uses by managing every acre on every forest for every use. Optimum use can better be achieved by providing the full range of multiple uses over the entire State Forest system while setting aside unique areas (perhaps for a single use).

- Outside the dedicated recreational area on each State Forest the character of the working forest area is best adapted to extensive, non-facility oriented recreation.
- The vegetative cover on State Forests is dominated by hardwood forests in various stages of succession. There is a large variety of native flora and fauna adapted to the hardwood forest ecosystem. State Forests should be managed to provide diverse habitat for native wildlife species and opportunities for consumptive and non-consumptive wildlife uses.
- The objective is to manage these forests to provide maximum diversity through creating or maintaining a complex of forest conditions.