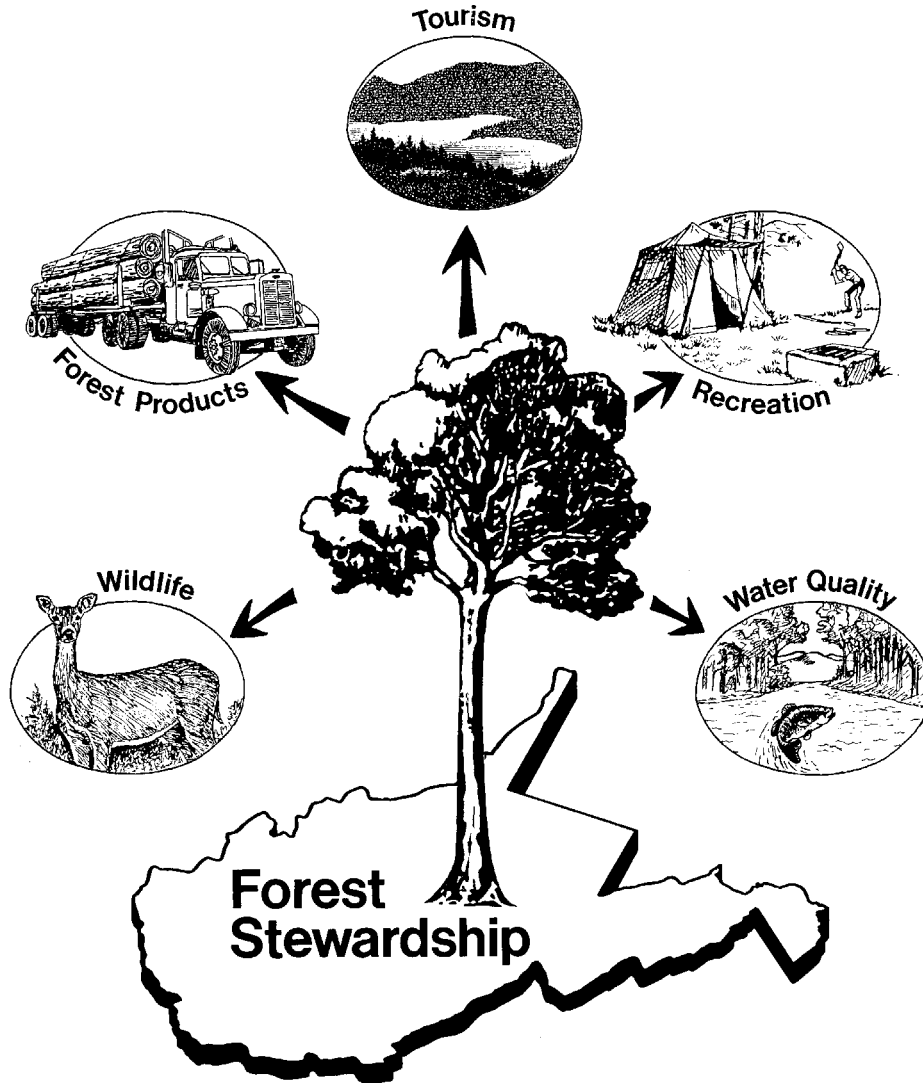


Guidelines for Managing West Virginia's Nine State Forests



by the
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PREFACE

These guidelines for managing the nine State-owned 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, and the Governor's Advisory Committee on State-owned Forests.

Members of Forest Management Review Commission (FMRC):

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Mr. Gordon Robertson, Deputy Chief, DNR Wildlife Section
Mr. Robert D. Whipkey, Assistant Administrative Forester, WV DOF

Public input will be received and pertinent comments incorporated as management plans and prescriptions are prepared for each of the nine State Forests (see Public Input, pages 2 and 3).

This document will serve as the standard by which all nine State-owned forests are managed. This document may be reviewed at the Charleston office of the Division of Forestry (DOF) and at each of the six DOF District Offices. Copies may be obtained at cost.

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GUIDELINES FOR MANAGING WEST VIRGINIA'S NINE STATE FORESTS

I. MISSION

Chapter 19-1A-1 of the Code of West Virginia states, "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." (1985, c. 41.) 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 nine 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 (see page 15 of these Guidelines) 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 7,500 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 nine State-owned forests by the Division of Forestry under the guidance and using input from the Governor's State Forest Advisory Committee, Forest Management Review Commission, and interested citizens.
- Management plan comments will be solicited from the Division of Natural Resources Wildlife Resources and Parks and Recreation sections and Tourism Section of the Development Office.
- The availability of a final draft of each plan will be advertised in statewide newspapers with a large circulation (twice over a two-week period). Included will be advertised times, dates, and locations to review the plan.
- Copies of the draft plan will be made available for a reasonable and customary fee.
- A public hearing will be conducted by the Division of Forestry between 30 and 40 days, from the date of the second newspaper advertisement. The public hearing 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 days following the hearing.

- The DOF Director will prepare and send to the commentors and those requesting such a "Report of Response" on all written comments within 90 days from the public hearing.
- The written comments and the Director's "Report of Response" will be retained on file at the designated District Forester's 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 hearing.
- The State Forest Management Plan will be revised and updated 10 years from the date of approval.
- 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 from the advisory committee.

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 and the Division of Tourism 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 and one with a large circulation. A statewide news release will also serve as a notice of the prepared prescription. The time and place for a public tour of the prescription area will also be listed in these advertisements.
- Within two weeks after the second announcement, a public presentation and public tour of the proposed treatment area will be held.

- Written comments will be received by the appropriate District Forester for two weeks (14 calendar days) following the tour date.
- The written comments must be signed and include a return address of the person or persons commenting.
- The District Forester will receive and Division of Forestry personnel will review and consider the written comments.
- The Director will prepare a response to those who submit serious comments and send them a "Report of Response".
- 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 Account, primarily for Division of Forestry forest fire prevention and suppression expenses. However, 25 percent of the revenue generated from the sale of forest products on State Forests may be returned to that State Forest for the enhancement of the overall forest environment, including recreation, wildlife resources, conservation education and watershed protection including water conservation through the development, where feasible, of small watershed impoundments. During severe forest fire occurrence, causing financial crises, these funds may be diverted to meet emergency situations.

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 absolutely necessary roads and trails will be developed.

E. DAMAGE FROM STORM, FIRE, INSECT, AND DISEASE

The Division of Forestry has existing agreements with the West Virginia Division of Natural Resources, Parks and Recreation Section, and the Wildlife Resources Section regarding State Forest protection. These agreements will be incorporated into an overall Memorandum of Understanding (now being revisited).

F. 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.

G. 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.

H. PESTICIDES

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

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. This forest is 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 200 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. These forest parameters will be sustained primarily through the single-tree selection silvicultural system. A healthy ecosystem in which structure and functions allow for the maintenance of biological diversity can be enhanced through single-tree selection.

By computing permissible cut data and considering 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 a permissible cut should be a minimum of 2,500 bd. ft./ac. International 1/4" tree scale. 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 permissible 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 Permissible Cut:** For sawtimber, 2.5 thousand 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, wetland 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 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 (Ref. #7) 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 the "Natural Heritage Notes" and a brochure on 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, aesthetic 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 and rare, threatened and endangered species. 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, 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. For specific procedures regarding the inventory, marking and selling of timber and conducting a timber harvest, see the Public Lands Management section of the West Virginia Division of Forestry's Forest Management Handbook. As specific silvicultural prescriptions are developed they will be added to the appropriate State-owned forest plan. Additionally, all proposed timber sales will conform to the Division of Forestry's policy "Public Input on State-owned Forest Management Prescriptions" (see Page 3).

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 which 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, 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 58,000 acres, the "working forest". The total area of State-owned forest is 79,385 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 17,000 acres (21%) of the total state forest system (79,385 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 Kanawha State Forest and in 100 foot wide riparian areas, wildlife protection areas, sensitive areas, improved recreation areas and recreation buffer areas. These are some of the more moist 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, or for the salvage of trees damaged by storm, fire, insect, disease or other natural occurrence.

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

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

- 1) Manage W.Va.'s State-owned 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 BMP's.

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

- The more diverse State-owned forest lands 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 forest the character of the working forest area of state-owned forests is best adapted to extensive, nonfacility oriented recreation.

- The vegetative cover on state-owned 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 nonconsumptive wildlife uses.

- The objective is to manage these forests to provide maximum diversity through creating or maintaining a complex of forest conditions.

VIII. STATE FOREST RULES AND REGULATIONS

General

These rules govern the public use of West Virginia State Parks, State Forests and State Wildlife Management Areas under the jurisdiction of the West Virginia Division of Tourism and Parks (now Natural Resources). The rules are necessary to provide for public health, safety and welfare and to protect state property.

General Rules Governing Public Use of West Virginia State Parks, State Forests, and State Wildlife Management Areas under the West Virginia Division of Tourism and Parks

1. It is unlawful to cut, deface, destroy or drive any object into any tree, shrub, rock, sign, building or other structure or object in a state park, state forest or state wildlife management area. This rule does not apply to the erection of temporary blinds or tree stands in state wildlife management areas.
2. It is unlawful to remove any manmade or natural object, material, substance, plant, animal, or historical or archeological relic or artifact from a state park, state forest, or state wildlife management area except those legally acquired through hunting and fishing in accordance with W. VA. Code 20-2-1 et seq. or upon proper authorization in writing by the Director of Parks and Recreation, Division of Tourism and Parks.
3. Fires may be lighted only in fireplaces, fire rings or grates provided by the state in places designated by the area superintendent. Those responsible

FOOTNOTE: State Forest rules and regulations may change as agreed upon among managing agencies and as necessary to govern the public use of West Virginia state forests.

for a fire shall extinguish it completely before leaving it. Ashes, charcoal briquets and other materials used for a fire shall be left in the fireplace, fire ring, grate or place designated for the fire, or be deposited in a trash container or a container provided specifically for the purpose but only after they are extinguished. Such materials shall not be strewn over the ground.

4. No person shall attempt to or hunt, catch, capture, take, kill, trap, pursue or have in possession any animal except as provided in W.Va. Code 20-2-1 et seq. Hunting is prohibited in all state parks; however, legally authorized hunting is permitted in state forests, and state wildlife management areas.
5. No person shall attempt to feed, or feed any animal in a state park, state forest, or state wildlife management area, except a pet they own, or as part of a wildlife management program officially approved by the state agency having lawful jurisdiction over the program.
6. Loud or excessive noise, demonstrations, disturbances, disorderly conduct, public drunkenness and the possession or use of controlled substances is prohibited and unlawful.
7. Swimming is prohibited in state parks, state forests, and state wildlife management areas, except in places designated for that purpose.
8. Recreational activities including, but not limited to, rock climbing, rappelling, hang gliding, parachuting, parasailing, sky diving, spelunking and other like or similar recreational activities that require a high degree of specialized training and equipment are permitted, except where they are prohibited by posted signs. Persons who intend to participate in any such activity shall register at the area superintendents office before engaging or participating in it and specify where it will take place and give evidence of proper training and equipment for the activity. Participants in such activities assume full responsibility and liability for any risk or injury related to the activity. Scenic rocks, overlooks and vistas are for providing scenic beauty and aesthetic benefit for guests; therefore they shall not be used for, or disfigured by, any such recreational activity. This rule does not apply to golf, skiing, horseback riding, hunting or fishing.
9. Garbage, waste, bottles, cans, paper, junk, or any other trash or refuse shall not be dumped, deposited or strewn within the boundary of any state park, state forest, or state wildlife management area.
10. Lodge rooms, cabins, campsites, picnic shelters, swimming pools and beaches, or any other facility shall not be subleased by guests or patrons.
11. It is unlawful for any person not to pay the rental charge or fee for any facility, service, activity or goods he uses or purchases in a state park, state forest, or state wildlife management area.

12. Only registered lodge, cabin, and camping guests, licensed hunters, and fishermen while hunting or fishing and persons who have authorized, legitimate business in a state park, state forest, or state wildlife management area are permitted on the premises between the closing hour of 10:00 P.M. and the opening of 6:00 A.M. during which hours they are closed to the general public.
13. Dogs and cats are the only pets permitted in state parks, state forests, and state wildlife management areas; however, they are prohibited in state park and state forest cabins and the areas immediately around them, in state park lodges, and in swimming pool and beach swimming areas. In and around campgrounds, picnic areas, playgrounds and other similar intense public use areas, they shall be restrained at all times on a sturdy leash not to exceed ten feet in length and their owner or master shall clean up the pet's excreta, keep it quiet and from disturbing other guests, and be responsible for all damages it causes.
14. Explosives, incendiaries, flammables and other dangerous substances are prohibited in state parks, state forests, and state wildlife management areas.
15. Uncased firearms, uncased bows and uncased arrows are prohibited in state parks, state forests, and state wildlife management areas, and on state trails, except;
 - a. When the area is open for hunting (hunting is prohibited in state parks) or when a registered park or forest guest has the written permission of the area superintendent to carry them cased from his lodge room, cabin or campsite to open hunting areas, or to an officially designated rifle, pistol, skeet, trap, target or shooting range.
 - b. Area superintendents may authorize their use in historical reenactments and plays.
 - c. The Director of parks and Recreation, Division of Tourism and Parks, may authorize their use for a limited period in conjunction with recreational and arts and crafts programs.
16. The Division of Tourism and Parks assumes no responsibility for any personal property. If personal property is abandoned or left unattended more than forty-eight (48) hours, it will be removed from the public use area and disposed of according to law.
17. Hawking, peddling, soliciting, begging, advertising or carrying on any business or commercial enterprise is prohibited in state parks, state forests, and state wildlife management areas without the written permission of the Commissioner of the Division of Tourism and Parks.

18. Fishing and boating are permitted in state parks, state forests, and state wildlife management areas only in accordance with state law, fishing and boating rules and regulations promulgated thereunder, and rules publicly posted in those areas.
19. The speed limit for motor vehicles is thirty (30) miles per hour in state parks, state forests and state wildlife management areas, except where a lower speed is posted. All traffic laws, signs and directions shall be observed. Driving of motor vehicles in any manner that creates a nuisance to any guest by repetition or continuous cruising or operation is prohibited.
20. Motor vehicles including, but not limited to trail bikes, motorbikes, snowmobiles, and all terrain vehicles may be operated only on public roads usable by automotive vehicles, and on trails and areas designated for their use by the area superintendent by posted signs. It is unlawful for any unauthorized motor vehicle to go beyond a gate, cable, or other obstruction, or to proceed beyond any sign prohibiting such travel. All motor vehicles in state recreational areas shall obey and comply with all applicable state laws, rules and regulations.
21. Mountain and trail bicycles may be operated only on public roads, trails and other readily recognizable passageways such as logging roads and oil/gas well roads, except that they shall not be operated on horseback riding trails when they are open and operating as horseback riding trails, nor shall they be operated on any trail or road where their use is prohibited by posted signs.

"Mountain and trail bicycles" means any devices designed for operation on mountains and trails having two tandem wheels and pedals for propelling it by human power.
22. No person may operate a vehicle in a manner so as to harass, chase or annoy any person or animal.
23. Beer, wine, liquor, and all other alcoholic beverages are prohibited within the boundaries of all historical, day use and natural area state parks, which are Beartown, Berkeley Springs, Carnifax Ferry Battlefield, Cass Scenic Railroad, Cathedral, Chief Logan, Droop Mountain Battlefield, Fairfax Stone Historic Monument, Little Beaver, Pinnacle Rock, Point Pleasant Battle Monument, Prickett's Fort, Valley Falls, and Watters Smith Memorial, and the Greenbrier River Trail; in the following vacation parks: Audra, Babcock, Camp Creek, Moncove Lake, Tomlinson Run except in reserved picnic shelters, in all boat launch ramp parking areas within the boundary of Bluestone State Park, and in all of Hawks Nest State Park except the lodge; in all state forests, which are Cabwaylingo, Calvin Price, Coopers Rock, Greenbrier, Kanawha, Kumbrabow, Panther, and Seneca; in the following state wildlife management areas: Berwind Lake, Big Ditch Lake, Bluestone, Laurel Lake, Pleasants Creek, Plum Orchard Lake, and Teter Creek Lake; and in those state park areas where they are prohibited by posted signs: Provided, That any person,

group or association sponsoring a private party and all the restaurant at Chief Logan State Park may provide beer, wine, liquor and all other alcoholic beverages for guests at the private party as long as the party is not open to the general public.

24. No person may operate a motor driven vehicle on the Greenbrier River Trail, except (a) those persons who have a vested right of ingress to and egress from the trail, (b) those persons who are authorized by the Commissioner of the Division of Tourism and Parks to use them in the management, construction, maintenance and operation of the trail and its facilities; or (c) to fight forest fires and handle other emergencies.
25. Any person may be evicted from a state park, state forest, or state wildlife management area for any breach of these rules or for the breach of any other rule which is in effect governing their use. All rentals, charges and fees are forfeited upon such eviction.

IX. MANDATED AUTHORITY

WEST VIRGINIA CODE (Chapters 19 and 20)

§19-1A-1. Legislative findings.

The Legislature finds that West Virginia has extensive forest resources and their continued development and expansion is vital to the economic well-being of the state and its people.

The Legislature also finds that the production potential of the state's forest resources remains far greater than the present demand.

The Legislature further finds that the promotion of existing forest products industries and the promotion of new forest products industries would benefit the state in terms of employment and additional revenue to the state.

The Legislature further finds and declares that, to increase employment and boost the state's economy, the limits to the development of the potential of West Virginia forest resources must be reduced through an intensive campaign aimed at making new contacts, developing new and existing markets and increasing public awareness of the advantages of the forest resources in West Virginia.

The Legislature further finds that the state forests are an important resource for silvicultural 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 therefor should be managed on a multiple-use basis. (1985, c. 41)

§19-1A-2. Legislative purposes.

The purposes of this article are to provide for promoting West Virginia products;

promoting new forest products industries; developing existing forest product industries; promoting coordination of all state forests resources; advising the governor and Legislature on all aspects of forestry, the management of state forests for conservation and preservation of wildlife, fish, forest species, natural areas, aesthetic and scenic values and to provide developed and undeveloped outdoor recreational opportunities, and hunting and fishing for the citizens of this state and its visitors. (1985, c. 41.)

§19-1A-3. Division of forestry; division director; duties, powers, dedication of certain moneys; creation of a special revenue account.

The division of forestry heretofore created is hereby continued. And, except as otherwise provided in this article, all powers and duties previously exercised by the director of natural resources under subsection (13), section seven [§ 20-1-7(13)], article one and article three [20-3-1 et seq.], chapter twenty of this code, except those powers and duties relating solely to wildlife areas as described in section three [§ 20-3-3], article three, chapter twenty of this code, heretofore transferred to the division of forestry, are hereby continued in the division of forestry. The division of forestry has within its jurisdiction and supervision the state forests, other forests and woodland areas, the protection of forest areas from injury and damage by fire, disease, insects and other pestilences and forces, the management of forest areas for natural resources, conservation and undeveloped recreational activities, administration of the southeastern interstate forest fire protection compact and other compacts and agreements relating to forest management and husbandry, and the administration and enforcement of laws relating to the conservation, development, protection, use and enjoyment of all forest land areas of the state consistent with the provisions of sections one and two [§§ 19-1A-1 and 19-1A-2] of this article. All moneys collected from the sale of timber realized through management of the state-owned forests and the sale of seedlings from the tree nurseries shall be paid into the state treasury and shall be credited to a special account within the division of forestry and used exclusively for the purposes of this article and article three, chapter twenty of this code.

§19-1A-4. Additional duties of the director of the division of forestry generally.

The division director shall encourage and assist in the location of new and expansion of existing wood products business and industry; stimulate and assist in the expansion of the forest industry; cooperate and act in conjunction with other organizations, public or private, the objects of which are the promotion and advancement of the wood products industry in this state. The division shall arrange for or conduct research in forest utilization and the marketing of forest products, affecting the industrial and commercial development of the state; shall correlate and interchange information and disseminate the results of such research; and shall, to the extent considered necessary, provide for or conduct additional research projects or pilot plant demonstrations of research results by cooperating with all appropriate existing educational, public and industrial institutions or agencies of the state.

The division director may exercise all powers necessary or appropriate to carry out and effectuate the purposes of this section, including the following powers, in addition to others herein granted:

- (a) To cooperate with industrial development agencies in their efforts to promote the

expansion of forest resources; and

(b) To pursue research and education related to forest resources and their multiple use, including conservation, management and utilization, evaluation of forest land use and the maintenance of the rural environment; the manufacture and marketing of forest products, the protection of recreation and aesthetic values, and the organization of technical advisory committees to assist in all or any other of these or any aspect of forestry.

The director shall study ways and shall advise the governor and the Legislature on all aspects of what is needed to:

(1) Improve the business climate for forest industries and the general awareness of forestry potentials;

(2) Develop a strong state forestry agency;

(3) Improve forest resources data;

(4) Improve the transportation system for wood products; and

(5) Improve forestry knowledge and practices of private landowners.

(c) To accept and use gifts, donations or contributions from individuals, associations, corporations and to acquire by gift, lease or purchase real estate for purposes within the powers and duties of the division.

(d) To promulgate rules and regulations, subject to the provisions of chapter twenty-nine-a [§ 29A-1-1 et seq.] of this code, for the management of state forests and to implement the programs and policies of this article. (1985, c. 41.)

DIVISION OF NATURAL RESOURCES

§20-1-7.

.....

(11) Acquire for the state in the name of the "division of natural resources" by purchase, condemnation, lease or agreement, or accept or reject for the state, in the name of the division of natural resources, gifts, donations, contributions, bequests or devises of money, security or property, both real and personal, and any interest in such property, including lands and waters, which he or she deems suitable for the following purposes:

(a) For state forests for the purpose of growing timber, demonstrating forestry, furnishing or protecting watersheds or providing public recreation;

(b) For state parks or recreation areas for the purpose of preserving scenic, aesthetic, scientific, cultural, archaeological or historical values or natural wonders, or providing public recreation;

(c) For public hunting, trapping or fishing grounds or waters for the purpose of providing areas in which the public may hunt, trap or fish, as permitted by the provisions of this chapter, and the rules issued hereunder;

.....

§20-2-1. Declaration of policy.

It is declared to be the public policy of the State of West Virginia that the wildlife resources of this State shall be protected for the use and enjoyment of all the citizens of this State. All species of wildlife shall be maintained for values which may be either

intrinsic or ecological or of benefit to man. Such benefits shall include (1) hunting, fishing and other diversified recreational uses; (2) economic contributions in the best interests of the people of this State; and (3) scientific and educational uses. (1969, c.88.)

ALR references. - Reservation in grant of land of right to hunt and fish, with like right to the grantee, as limiting the right of the grantee to actual owners of the land, 32 ALR 1533.

Opening or closing season, power of game warden or commission as to, 34 ALR 832.

Hunter's rights, title, and remedies in respect of game which he is pursuing or has killed or wounded, 49 ALR 1498.

Nonresidents, validity of discrimination against, 61 ALR 338; 112 ALR 63.
Licensing or otherwise regulating business of breeding and dealing in game or undomesticated animals, constitutionality of, 62 ALR 473.

Validity, construction, and effect of statutes or regulations making possession of fish or game, or specified hunting or fishing equipment prima facie evidence of violation, 81 ALR2d 1093.

Applied in *Shobe v. Latimer*, 162 W.Va. 779, 253 S.E.2d 54 (1979).

§20-2-3. State ownership of wildlife.

The ownership of and title to all wild animals, wild birds, both migratory and resident, and all fish, amphibians, and all forms of aquatic life in the State of West Virginia is hereby declared to be in the State, as trustee for the people. No such wildlife shall be taken or hunted in any manner, or at any time, unless the person so taking or hunting the same shall consent that the title thereto shall be and remain in the State of West Virginia for the purpose of regulating the taking, hunting, using and disposing of the same. The taking or hunting of wildlife at any time or in any manner by any person shall be deemed such consent: Provided, however, that all fish, frogs and other aquatic life in privately owned ponds are, and shall remain, the private property of the owner or owners of such privately owned ponds, and that such fish, frogs and other aquatic life in such privately owned ponds may be caught, taken or killed by such owner or owners at any time. (1929, c. 13, § 17; 1939, c. 64; 1947, c. 96; 1961, c. 133.)

Michie's Jurisprudence.-As to control of public property, see 4A, M.J., Constitutional Law. As to regulation and protection of fish, see 8B M.J., Fish and Fisheries. As to game and game laws, see 9AM.J., Game and Game Laws.

Fish-threatening pollutants. - The State is owner of the fish in its streams, and, as such, under its police power, may enact legislation to protect the propagation of fish from injury resulting from placing in, or allowing the entrance into, streams of any matter deleterious to the propagation of fish. *State v. Southern Coal & Transp. Co.*, 71 W.Va. 470, 76 S.E. 970 (1912).

Applied in *Shobe v. Latimer*, 162 W.Va. 779, 253 S.E. 2d 54 (1979).

FORESTS AND WILDLIFE AREAS

§20-3-2. Acquisition of suitable lands by director*; maintenance thereof as

state forests or wildlife areas; relinquishment of construction and maintenance of roads to the commissioner of highways.

The director may with the consent of the governor purchase, in the name of the State, out of funds set aside for the purpose, or out of any unused funds in his hands, lands suitable for forest culture, state forests or wildlife refuges, public hunting areas, public fishing areas, public hunting and fishing areas, public access sites and other lands for the purposes set forth in this article. Such funds may also be used for the construction of dams for fish refuges on lands so acquired. Purchase may be made on terms requiring not less than one third of the purchase price to be paid at the time of the conveyance with the residue to be paid in not less than one or two years after date. The director may also receive the gift, in the name of the State, of such lands by deed or bequest. In all cases of transfer to the State, the fee simple title shall pass to the State, except minerals and mining rights to remove such minerals may be excepted or reserved.

The director shall protect, preserve and maintain lands so acquired as forest culture areas, state forests, wildlife areas, public hunting areas, public fishing areas, public hunting and fishing areas, public access sites and other such lands for the propagation and distribution of the fish, wild animals and birds thereon. He may prescribe and enforce rules and regulations consistent with the laws of the State to carry out that objective. The director may prescribe and enforce rules prohibiting all hunting and fishing, pursuing, catching, trapping, capturing and killing of fish, wild animals and birds upon such areas and lands for such length of time as he may deem proper.

The director may provide special regulations and open seasons for the taking of any wild birds, wild animals or fish upon such areas and lands in the manner provided in this chapter.

Except for the authority and responsibility to do the necessary cutting and planting of vegetation along road rights-of-way in state parks, state forests, and public hunting and fishing areas, the director of the department of natural resources shall, upon the effective date of this section [May 11, 1975], relinquish to the commissioner of highways his authority over publicly owned roads in state parks, state forests and public hunting and fishing areas, and shall thereafter neither construct, reconstruct nor maintain any road or vehicular bridge for public usage in such areas except as is specifically authorized by this chapter. This relinquishment shall not be construed to alter the responsibilities assigned to the director of the department of natural resources in section eleven [§20-4-11; repealed], article four, chapter twenty of the Code of West Virginia. (1929, c. 13, §§ 94, 117-119; 1939, c. 64; 1953, c. 109; 1961, c. 133; 1972, c. 101; 1975, c. 173.)

Cross references. - Authority of commissioner of highways over publicly owned roads within the state park system and in the state forests, including public hunting and fishing areas. §17-4-1.

Editor's notes. - For notes relating to the transfer of the division of forestry and the transfer of the powers and duties of the director of the department of natural resources relating to forestry, see the Editor's note at the beginning of this article. The opinions below were rendered prior to the transfer of jurisdiction.

Area set aside for use of muzzle-loaded guns and primitive weapons. - The director of the department of natural resources has the legal authority to take a presently owned or leased public hunting area and set it aside for hunting only

with muzzle-loaded guns or other primitive weapons, provided that such action on the part of the director is done by the issuance of regulations and that said regulations are promulgated and adopted in accordance with chapter 29A. Op. Att'y Gen., Sept. 2, 1976.

The land comprising the eighteen cemeteries in Panther state forest and Camp Creek state forest has, by long continued use, become dedicated to cemetery purposes, and therefore the department of natural resources may not, without additional statutory authority, remove the remains of persons buried therein. This is true even though there is absence of cemetery reservations in the deeds conveying the land to the State. Moreover, the department of natural resources has no authority to prevent the remaining space in the five active cemeteries from being used for burial purposes. However, once the grave capacity of these cemeteries is filled, the department of natural resources has the legal right to prevent the future expansion of these five cemeteries, for the surrounding land is owned by the department of natural resources and is free of the dedication for cemetery purposes. 51 Op. Att'y Gen. 28 (1964).

Stated in West Virginia Chiropractic Soc'y Inc. v. Merritt, 358 S.E.2d 432 W.Va. 1987).

§20-3-3. Establishment of wildlife areas; leasing lands therefor.

The director shall establish and maintain wildlife areas on lands purchased, leased or given for this purpose. Upon such state-owned or leased lands under its administration, or lands purchased from departmental funds for the establishment of wildlife areas, or upon lands purchased in cooperation with any agency of the federal government or leased therefrom or managed cooperatively therewith, the director shall regulate public hunting, chasing for sport, shooting, and limit the number of wildlife, which may be taken from such areas open to public shooting in any year. The director may establish special open seasons on any such lands, and may close any such areas, or parts thereof, to public shooting.

It shall be unlawful at any time to hunt, pursue or molest in any manner, any animals, birds or fowls on that section of any wildlife area designated as wildlife refuge, except that any legally constituted enforcement officer, or other person designated by the director, may hunt, pursue, catch and kill in any manner predatory animals and predatory birds thereon.

On the boundary of each state wildlife refuge, there shall be posted in conspicuous places, not more than one hundred and fifty yards apart, notices bearing the following words: "State wildlife refuge--hunting is unlawful," and such other information or rules and regulations as the director may deem advisable. On the boundary line of any such wildlife area which has been established as a public shooting ground, the director shall have posted in conspicuous places, not more than one hundred and fifty yards apart, notices bearing the following words: "Public shooting grounds," together with information as to when hunting is legal on such tract.

The director shall also have the power to lease lands for this purpose for not less than ten-year periods, the rental price thereof not to be more than the amount of the annual property taxes on such land, and in no event to exceed ten cents per acre per annum.

The director may, with the consent of the owner, set apart any tract of land in the State as a wildlife area. When such lands have been set apart, the director shall manage them

in the same manner and for the same purpose as wildlife areas owned by the State. Such lands not owned by the State and now operated by the director as wildlife areas shall, at the expiration of the agreement, be reorganized as wildlife areas or be discontinued. (1929, c. 13, §§ 95, 96; 1939, c. 64; 1961, c. 133.)

Editor's notes. - The powers and duties of the director of the department of natural resources relating solely to wildlife areas as described in this section were excepted from the general transfer of forestry functions to the department of agriculture.

Area set aside for use of muzzle-loaded guns and primitive weapons. - The director of the department of natural resources has the legal authority to take a presently owned or leased public hunting area and set it aside for hunting only with muzzle-loaded guns or other primitive weapons, provided that such action on the part of the director is done by the issuance of regulations and that said regulations are promulgated and adopted in accordance with chapter 29A. Op. Att'y gen., Sept. 2, 1976.

DEPARTMENT OF NATURAL RESOURCES, JURISDICTION ON STATE FORESTS RECREATION AREAS

§20-5-2. Powers of the director with respect to the section of parks and recreation.

The director of the division of natural resources shall be responsible for the execution and administration of the provisions herein as an integral part of the parks and recreation program of the state and shall organize and staff the section of parks and recreation for the orderly, efficient and economical accomplishment of these ends. The authority granted in the year one thousand nine hundred ninety-four to the director of the division of natural resources to employ up to six additional unclassified personnel to carry out the parks functions of the division of natural resources is continued.

The director of the division of natural resources shall further have the authority, power and duty to:

(a) Establish, manage and maintain the state's parks and recreation system for the benefit of the people of this state and do all things necessary and incidental to the development and administration thereof;

(b) Acquire property for the state in the name of the division of natural resources by purchase, lease or agreement; retain, employ and contract with legal advisors and consultants; or accept or reject for the state, in the name of the division, gifts, donations, contributions, bequests or devises of money, security or property, both real and personal, land any interest in such property, including lands and waters, for state park or recreational areas for the purpose of providing public recreation: *Provided*, That the provisions of section twenty, article one of this chapter are specifically made applicable to any acquisitions of land: *Provided, however*, That any sale, exchange or transfer of property for the purposes of completing land acquisitions or providing improved recreational opportunities to the citizens of the state shall be subject to the procedures of article one-a of this chapter: *Provided further*, That no sale of any park or recreational area property, including lands and waters, used for purposes of providing

public recreation on the effective date of this article and no privatization of any park may occur without statutory authority.

(c) Approve and direct the use of all revenue derived from the operation of the state parks and public recreation system for the operation, maintenance and improvement of the system, individual projects of the system or for the retirement of park development revenue bonds;

(d) Approve the use of no less than twenty percent of the: (i) Funds appropriated for purposes of advertising and marketing expenses related to the promotion and development of tourism, pursuant to subsection (j), section eighteen, article twenty-two, chapter twenty-nine of this code; and (ii) funds authorized for expenditure from the tourism promotion fund for purposes of direct advertising, pursuant to section twelve, article twenty-two-a, chapter twenty-nine of this code, to effectively promote and market the state's parks, state forests, state recreation areas and wildlife recreational resources;

(e) Issue park development revenue bonds as provided in this article;

(f) Provide for the construction and operation of cabins, lodges, resorts, restaurants and other developed recreational service facilities, subject to the provisions of section fifteen of this article and section twenty, article one of this chapter;

(g) Promulgate rules to control uses of the parks, subject to the provisions of chapter twenty-nine-a of this code: *Provided*, That the director shall not permit public hunting, the exploitation of minerals or the harvesting of timber for commercial purposes in any state park;

(h) Notwithstanding any provision of this code to the contrary, the director may, for amounts less than two hundred fifty dollars, exempt designated state parks from the requirements that all payments must be deposited in a bank within twenty-four hours;

(i) The director of the division of natural resources shall waive the use fee normally charged to an individual or group for one day's use of a picnic shelter or one week's use of a cabin in a state recreation area when the individual or group donates the materials and labor for the construction of the picnic shelter or cabin: *Provided*, That the individual or group was authorized by the director to construct the picnic shelter or cabin and that it was constructed in accordance with the authorization granted and the standards and requirements of the division pertaining to such construction. The individual or group to whom the waiver is granted may use the picnic shelter for one reserved day or the cabin for one reserved week during each calendar year until the amount of the donation equals the amount of the loss of revenue from the waiver or until the individual dies or the group ceases to exist, whichever first occurs. The waiver is not transferable. The director shall permit free use of picnic shelters or cabins to individuals or groups who have contributed materials and labor for construction of picnic shelters or cabins prior to the effective date of this section. The director shall promulgate a legislative rule in accordance with the provisions of chapter twenty-nine-a of this code governing the free use of picnic shelters or cabins provided for in this section, the eligibility for free use, determining the value of the donations of labor and materials, the appropriate definitions of a group and the maximum time limit for each use;

(j) Provide within the parks a market for West Virginia arts, crafts and products, which shall permit gift shops within the parks to offer for sale items purchased on the open market from local artists, artisans, craftsmen and suppliers and local or regional crafts cooperatives; and

(k) Promote and disseminate information related to the attractions of the state through the continued operation of the state's telemarketing initiative, which is hereby transferred

to the division of natural resources effective the first day of July, one thousand nine hundred ninety-six, which telemarketing initiative shall include a centralized reservation and information system for state parks and recreational facilities.

§20-5-3. Section of parks and recreation; purpose; powers and duties generally.

The purposes of the section of parks and recreation shall be to promote conservation by preserving and protecting natural areas of unique or exceptional scenic, scientific, cultural, archaeological or historic significance and to provide outdoor recreational opportunities for the citizens of this state and its visitors. It shall be the duty of the section of parks and recreation to have within its jurisdiction and supervision:

(a) All state parks and recreation areas, including all lodges, cabins, swimming pools, motor boating and all other recreational facilities therein, except the roads heretofore transferred pursuant to section one, article four, chapter seventeen of this code to the state road system and to the responsibility of the commissioner of highways with respect to the construction, reconstruction and maintenance of the roads or any future roads for public usage on publicly owned lands for future state parks, state forests and public hunting and fishing areas;

(b) The authority and responsibility to do the necessary cutting and planting of vegetation along road rights-of-way in state parks and recreational areas;

(c) The administration of all laws and regulations relating to the establishment, development, protection, use and enjoyment of all state parks and state recreational facilities consistent with the provisions of this article;

(d) The continued operation and maintenance of the Berkeley Springs historical state park, in Morgan county, as a state recreational facility, designated the Berkeley Springs sanitarium under prior enactment of this code;

(e) The continued operation and maintenance of that portion of Washington Carver camp in Fayette county formerly incorporated within the boundaries of Babcock state park;

(f) The continued operation and maintenance of Camp Creek state park as a state recreational facility, formerly delineated according to section three, article one-a, chapter nineteen of this code;

(g) The continued operation and maintenance of Moncove Lake state park as a state recreational facility, formerly delineated pursuant to enactment of section thirteen, article one, chapter five-b of this code in the year one thousand nine hundred ninety;

(h) The continued protection, operation and maintenance of approximately seventy-five miles of right-of-way along the former Greenbrier subdivision of the Chessie railroad system between Caldwell in Greenbrier county and Cass in Pocahontas county, designated the Greenbrier river trail, including the protection of the trail from motorized vehicular traffic and operation for the protection of adjacent public and private property; and

(i) The continued protection, operation and maintenance of approximately sixty and fifty-seven one-hundredths miles of right-of-way of the CSX railway system between Walker in Wood county and Wilsonburg in Harrison county, designated the North Bend rail trail, including the protection of the trail from motorized vehicular traffic and operation for the protection of adjacent public and private property.

X. SILVICULTURAL TREATMENTS

Silviculture is the theory and practice of controlling forest establishment, composition, and growth.

Single-Tree Selection

This treatment is the most commonly used practice currently employed on the forest. Each tree is examined and a judgment is made on the basis of established guidelines as to whether to remove that tree. The guidelines are based on the silvicultural and wildlife benefit characteristics of that tree and adjacent trees and how the diversity of the area will be affected. This method favors an uneven-aged character. Single-tree selection is often the primary practice used in a harvest, but may also be used in combination with other treatments. The primary benefit of single-tree selection is the retention of mature trees for economic, wildlife and aesthetic reasons.

Shelterwood (Two- or Three-Cut Method):

This practice is most useful where stand maturity has been reached and biological or environmental factors cause the successful establishment of desirable regeneration to be questionable using other silvicultural treatments. The shelterwood method involves the gradual removal of the entire stand in a series of partial cuttings which extend over a fraction of the rotation. The purpose is to encourage seedlings of shade intolerant species. Retaining a suitable portion of the mature stand preserves the character of the stand. If the intended regeneration of the stand fails, the source of renewal is still present. Once regeneration is considered successful, further removal can occur. The transition from a mature stand to a young stand takes place incremental and is therefore less traumatic to the forest community than if a clear-cut had been employed.

Group Selection:

This treatment is usually not employed as the sole practice during a timber harvest. Group selection can best be described as removing an entire group of mature stems, generally covering no more than one-fourth acre. Intolerant tree species (those intolerant to shade--requiring direct sunlight for growth) are best regenerated by this practice.

Even-Age Management:

This silvicultural practice has become commonly known as clear-cutting. When used, all trees on a designated area are cut, allowing the entire area to regenerate. Even-aged management produces a site suitable for intolerant tree species, which generally are among the most valuable species for timber and for wildlife. This also creates habitat for those species (both flora and fauna) tolerant of disturbance and desiring early stages of succession. However, even-aged management on State Forests may only be used to develop wildlife food plots or habitat (as recommended by the Wildlife Resources Section of the DNR), for research, or for the salvage of trees damaged by storm, fire, insects, or disease.

Seedtree:

This practice is best suited for use where the benefits of a clear-cut are desired, but the lack of desired regeneration precludes its use. On these occasions, the best

seed-bearing stems of the desired species are left to provide seed for the area. Trees left per acre range from two to ten. The need for this practice is determined by an analysis of the data collected during the inventory performed prior to writing the prescription for the area.

Deferment Cut:

This practice combines the advantages of clear-cutting with those of shelterwood cutting, while striving to produce higher quality logs by the end of the second rotation. Up to 20% of the basal area of the stand is carefully selected for retention. These trees are meant to remain through the end of the succeeding rotation. A deferment cut is useful when an area needs to be regenerated to intolerant tree species and where trees with a potential for long life and high quality development can make up the residual stand. At the same time, den trees, snags and vertical structure for wildlife can be maintained.

Timber Stand Improvement:

In addition to the previously discussed harvest practices, the need to improve conditions in younger stands is often desirable. As a result we sometimes engage in activities collectively called "timber stand improvement" or "TSI." Any cultural practice conducted in immature stands which serves to improve the quality of the stand or speed the maturing process, is considered to be a TSI practice.

Most often TSI consists of thinning pole-sized stands to reduce the number of stems on the area and concentrate future growth on stems of high potential. This practice has been proven effective in a wide variety of stand conditions and guidelines exist for its implementation. Most often the trees cut have very little economic value and are therefore left on the ground. This material provides coarse woody debris; habitat for salamanders, snakes and other vertebrates, invertebrates, fungi and plants that decompose this material continuing the nutrient cycle of the forest.

Sometimes markets exist for some of the thinned material, or firewood is another potential use for some of these excess stems. When a rustic fence, mine material or similar market exists stands slightly larger than pole size can be thinned with some of the larger trees of poor quality being removed along with the small diameter trees.

Grapevine control is also considered a TSI practice. On occasion, the proliferation of grapevines in an area becomes damaging when the vines overtop younger trees and when the vines wrap around tree trunks, strangling the tree. Grapevine control can limit this. The practice is limited by labor costs and wildlife management recommendations, and only considered in stands of potential high quality and value.

Stands containing a high percentage of cull trees (those containing less than 50% usable wood) should have the majority of these culls removed to improve the quality and vigor of the stand. Some cull trees are left as den trees, usually three to five per acre. The reduction of competition increases the stand quality and allows for the establishment of additional regeneration.

Pruning is a TSI practice useful in pine stands and hardwood stands of very high value.

XI. GLOSSARY

These definitions reflect the use of these terms in this plan.

ACRE - A unit of area used in land measurement equal to 160 square poles, 4,800 square yards or 43,560 square feet.

ADVANCE REGENERATION - Seedlings or saplings that are present in the understory prior to removal of any overstory.

AGE CLASS - A group of trees in a stand that are at or nearly the same age.

ARTIFICIAL REGENERATION (reproduction) - Creation of a new age class by direct seedling, or by planting seedlings or cuttings.

AESTHETICS - The perception of beauty conveyed by a natural scene, a pleasant sight.

BASAL AREA - Total area of cross section of stems measured at breast height (4 ½ feet above the ground), usually expressed in square feet per acre.

BEST MANAGEMENT PRACTICES - Guidelines establishing standards for all aspects of logging which have been developed to reduce sedimentation of streams.

BIOLOGICAL DIVERSITY - The distribution and abundance of different plant and animal communities.

BURNING, PRESCRIBED - The application of fire, usually under existing stands and under specific conditions of weather and fuel moisture, in order to control vegetation to meet goals of silviculture or hazard or disease reduction.

CLEANING - A release treatment made in an age class not past the sapling stage in order to free the favored trees from less desirable individuals of the same age class which overtop them or are likely to do so.

CLEAR-CUT - An even-age method of regenerating a stand through the removal, in a single cut, of all trees larger than seedlings. The new age class develops in a fully-exposed microclimate. In some situations, small numbers of trees may be left within the clear-cut opening for some special purpose.

CLIMAX FOREST - The final stage of succession, that is relatively stable and self-perpetuating.

COMPETITION - the constant demand of each organism for more growing space, light, nutrients and water.

COMPOSITION, STAND - The proportion of each tree species in a stand expressed as a percentage of either the total number, basal area, or volume of all tree species in the

stand.

CONDITIONING CUT - A harvest cut which is used to improve the overall health of the stand by removing mature, overmature, low vigor and poor quality trees. The result is a stand of better stocking, more vigorous and desirable species, increased diversity, quality and growth potential.

CONSERVATION - The wise-use of natural resources. The management of a resource which retains the basic character of that resource over time.

CROP TREE - Any tree that is selected to become a component of a future final harvest.

CROWN CLASS - A class of tree based on crown position relative to crowns of adjacent trees.

Dominant - Trees with crowns extending above the general level of the main canopy of groups of trees, and receiving full light from above and comparatively little from the sides.

Codominant - Trees with crowns forming the general level of the main canopy in groups of trees, receiving full light from above and comparatively little from the sides.

Intermediate - Trees with crowns extending into the lower portion of the main canopy of groups of trees, but shorter in height than the codominants. They receive little direct light from above and none from the sides.

Overtopped (suppressed) - Trees of varying levels of vigor that have their crowns completely covered by the crowns of one or more neighboring trees. These trees receive little if any direct light.

CROWN COVER - The ground area covered by the crowns of trees or woody vegetation as delimited by the vertical projection of crown perimeters and commonly expressed as percent of total ground area (syn. Canopy Cover).

CROWN DENSITY - The compactness, or depth of foliage of the crowns of trees and/or shrubs.

CULL TREES - Any tree in which 50% or more of the total volume is defective.

CUTTING CYCLE - The planned interval between partial harvests in an uneven-aged stand.

DEFERMENT CUT- A regeneration practice during which, up to 20% of the basal area of the stand is carefully selected for retention. These trees are meant to remain through the end of the succeeding rotation. This practice creates a two-aged stand.

DEN TREE - Any tree with one or more cavities that afford shelter or protection to wildlife.

DIAMETER AT BREAST HEIGHT (DBH) - A measuring point on a tree made at 4½ feet above the ground on the uphill side.

DIAMETER CLASSES - A group of trees or logs of similar sizes at a common point. Usually in two-inch increments at DBH for trees and one-inch increments, inside the bark on the small end for logs.

ECOLOGICAL APPROACH - Natural resource planning and management activities that assure consideration of the relationship between all organisms (including humans) and their environment.

ECOLOGICAL PROCESSES - The actions or events that link organisms (including humans) and their environment, such as disturbance, successional development, nutrient cycling, carbon sequestration, productivity, and decay.

ECOREGION - A continuous geographic area over which the macroclimate is sufficiently uniform to permit development of similar ecosystems on sites with similar properties. Ecoregions contain multiple landscapes with different spatial patterns of ecosystems.

ECOSYSTEM - The natural complex of plant and animal populations and the particular sets of physical conditions under which they exist.

EMERGENT (aquatic plant beds) - A site covered by water populated by plant species whose roots are below the surface and which extend some part of the plant above the surface. An indicator of wetlands.

ENDANGERED SPECIES - Any life form which is in danger of extinction throughout all or a significant portion of its range. Its population level is so critically low and/or its habitat is so degraded that immediate action must be taken to avoid the loss of the species.

ENVIRONMENT - All the conditions, circumstances, and influences surrounding, and affecting the development of, an organism or group of organisms.

EVEN-AGED STAND - A stand of trees containing a single age class in which the range of tree ages is usually less than 20 percent of rotation.

EXCLUDED AREA - A specifically designated area segregated from the predominant activity. An area set aside from specific management regimes.

FAUNA - Of or related to animals, the animals of a specified region or time, a descriptive list of such animals.

FLORA - Of or relating to plants, the plants of a particular region or time, a descriptive list of such plants.

FOREST HEALTH - Forest can be considered healthy when there is a balance between growth and mortality, and the forest has the resiliency to react and overcome various forest impacts. Potential forest stressors include insects, pathogens, weather, climate, pollution, and others.

FOREST PRODUCT - Something produced during the natural processes in a forest.

FOREST PRODUCTIVITY - The ability of tree species to grow on a particular site; influenced by internal (tree physiology) and external (soil, climate) factors.

FOREST RESOURCES - Natural resources associated with forested ecosystems, included but not limited to; fish, air, clean water, wildlife, vegetation, soil, recreation and aesthetics.

FORESTRY - A profession embracing the science, business, and art of creating, conserving, and managing forests and forest lands for the benefit of society.

FRAGMENTATION - The breaking up of contiguous areas into smaller patches of increasing degrees of dissimilarity.

FULLY STOCKED STANDS - Any stand containing a combination of basal area and stems per acre sufficient to indicate optimum use of the available growing space.

GROUP SELECTION - A method of regenerating uneven-aged stands in which trees are removed, and new age classes are established, in small groups. The maximum width of the group is approximately twice the height of the mature trees, with these small openings providing micro-environments suitable to regenerate shade intolerant tree species (requiring direct sunlight for growth). These areas are generally not more than one-quarter acre in size.

HABITAT - The specific combination of food, shelter, and water that is required to accommodate a species.

HARDWOOD STAND - Any forest stand in which the number of stems, basal area or volume consists of a majority of broad-leaf tree species.

IMPROVEMENT CUTTING - A cutting made in a stand past the sapling stage primarily to improve composition and quality by removing less desirable trees.

INGROWTH - Trees that, during a specified period, have grown past an arbitrary lower limit of (usually) diameter or height. Ingrowth is usually measured as basal area or volume per unit area.

INTERMITTENT STREAMS - Any water course which carries a visible flow of water periodically, usually depending on the season of the year, or the current and recent weather condition.

INTERMEDIATE TREATMENTS - A collective term for any treatment designed to enhance growth, quality, vigor, and composition of the stand after establishment of regeneration and prior to final harvest.

INVENTORY (forest) - The gathering of information such as the forest condition, land area, tree volumes, growth and mortality to provide for effective management planning.

LANDSCAPE - An area composed of interacting ecosystems that are repeated because of geology, land form, soils, climate, biota and human influences throughout the area. Landscapes are generally of a size, shape and pattern which is determined by interacting ecosystems.

LIBERATION - A release treatment made to a stand not past the sapling stage in order to free the favored trees from competition of older, overtopping trees.

MATURE FOREST - Generally used in an economic sense to indicate that a forest has attained harvest age.

MULTIPLE-USE - The act of satisfying more than one need with a single resource.

NATURAL REGENERATION - A stand of trees created from natural seeding, sprouting, suckering, or layering.

NURSE TREE (Nurse Crop) - A tree, group of trees, shrubs, or other plants, either naturally occurring or introduced, used to nurture or improve the form of a more important tree or crop during youth by protecting it from frost, sun scald or wind.

NUTRIENT CYCLE - The movement of soluble chemicals from the soil to the roots of plants into the stems and foliage; back to the surface of the ground in the form of leaves, fruits and twigs; and into soluble compounds again by the decomposition of this litter through the combined action of bacteria, fungi and soil animals.

OLD-GROWTH FOREST - Forests that contain a wide range of tree sizes and ages, a deep, multilayered crown canopy, diverse shrub and forb layers, and significant accumulations of coarse woody debris including snags and fallen logs. Stands typically appear all-aged rather than even-aged. Large trees can be evidence that the old growth ecosystem has had sufficient time to develop diverse structure, although not all old growth stands have large trees, particularly on less productive sites. Large trees can exist in relatively young stands on very productive sites.

OVERSTORY REMOVAL - The cutting of trees comprising an upper canopy layer in order to release trees or other vegetation in an understory.

PARTIAL CUTTING - The removal of a specific segment or component of a stand in a single operation, followed by a series of operations which remove other components until a specific goal is attained.

PERENNIAL STREAMS - Any stream channel containing a visible volume of water throughout the year with the exception of drought periods.

PERMISSIBLE CUT - The volume of timber that can be removed from a fully stocked stand without adversely affecting the stands ability to fully utilize the available growing space within the stand.

PINE STAND - Any forest stand whose composition, based on number of stems, volume, or basal area, consists of a majority of pine species (trees with needles in bundles).

PRECOMMERCIAL THINNING - A thinning that does not yield trees of commercial value, usually designed to improve crop spacing.

PRESCRIPTIONS - The written instructions by a forester for the preparation and administration of a resource management practice.

PRESERVATION - The act of guarding, securing, or sustaining an item so as to retain its character and quality.

PROPAGATION - To breed or multiply by regeneration, seed or cuttings.

PRUNING - To cut off or remove dead or living tree branches to improve tree growth, quality and commercial value of the tree.

RARE (species) - Species of a given region that are found in unusual habitats where local edaphic, topographic or biotic factors provide conditions unfavorable for those species having a more widespread distribution. Examples of such areas in WV are; rock cliffs, rocky water splashed river banks, sphagnum bogs (or glades) and shale barrens.

REGENERATION (reproduction) METHOD - A cutting method by which a new age class is created. The major methods are clear cutting, seed tree, shelterwood, selection, and coppice.

Coppice Methods - Methods of regenerating a stand in which the majority of regeneration is from stump sprouts or root suckers.

REGULAR UNEVEN-AGED (balanced) STAND - A stand in which three or more distinct age classes occupy approximately equal areas and provide a balanced distribution of diameter classes.

RELEASE - A treatment designed to free young trees from undesirable, usually overtopping, competing vegetation. Treatments include cleaning, liberation and weeding.

RESIDUAL STAND - The aggregate of trees remaining in a stand following a silvicultural practice or natural disturbance.

RIPARIAN ZONE - The immediate area influenced by the presence of a concentration of water. The banks of streams, lakes or marshes.

ROTATION - The planned number of years between the regeneration of a forest stand and its final cutting.

SALVAGE CUTTING - The removal of dead trees or trees being damaged or killed by injurious agents other than competition, to recover value that would otherwise be lost.

SANITATION CUTTING - The removal of trees to improve stand health and to reduce actual or anticipated spread of insects and disease.

SAPLING - A tree, usually young, that is larger than a seedling but smaller than a pole, generally between 1" and 5" in diameter.

SECONDARY GROWTH FOREST - The forest subsequent to a harvest or other disturbance.

SECONDARY SUCCESSION - The succession or progression of plant communities that occurs on a site that previously contained a plant community that was removed by natural or man-caused disturbance. Primary succession is a term applied to vegetational changes that occur on sites where no vegetation has grown before (e.g., a new island, newly exposed rock).

SEDIMENTATION - The process of depositing a solid after being transported by a liquid. The act or process of depositing soil particles onto the stream bed.

SEED TREE METHOD - An even-aged regeneration method in which a new age class develops from seedlings that germinate in fully exposed micro-environments after removal of all the previous stand except a small number of trees left to provide seed. Seed trees are removed after regeneration is established.

SHADE INTOLERANT - A description assigned to any tree species whose seedlings are incapable of sustained development in low light.

SHADE TOLERANT - Plants that are more competitive in shaded environments through selection for low respiration rates, they also tend to have lower photosynthetic rates and hence grow slowly in all environments.

SHRUB - A woody plant of relatively low height, distinguished from a tree by having several stems rather than a single trunk.

SHELTERWOOD METHOD - A method of regenerating an even-aged stand in which a new age class develops beneath the partially-shaded micro-environment provided by the residual trees. In one or more succeeding harvests the residual stand is removed to fully release the established regeneration.

SILVICULTURE - The art and science of controlling the establishment, growth, composition, health, and quality of forests and woodlands. Silviculture entails the manipulation of forest and woodland vegetation in stands and on landscapes to meet the diverse needs and values of landowners and society on a sustainable basis.

SILVICULTURE SYSTEM - A planned process whereby a stand is tended, harvested, and re-established. The system name is based on the number of age classes and/or the regeneration method used.

SINGLE TREE SELECTION - A method of creating new age classes in uneven-aged stands in which individual trees of all size classes are removed more or less uniformly

throughout the stand to achieve desired stand structural characteristics.

SITE CLASS - A classification of site quality, usually expressed in terms of ranges of dominant tree height at a given age or potential mean annual increment at culmination.

SITE QUALITY (productivity) - The productive capacity of a site, usually expressed as volume production of a given species.

SITE PREPARATION - Reduction of competing vegetation, the removal of physical obstacles to planting and the drainage of water toward or away from the planted trees - to insure successful establishment of new trees.

SITES - Areas considered by ecological factors with reference to capacity to produce forests or other vegetation; the combination of biotic, climatic, and soil conditions of an area.

SIZE CLASSES - Tree sizes recognized by distinct ranges, usually of diameter or height.

SNAG - A standing dead tree from which the leaves and most of the branches have fallen.

SPECIAL TREATMENT AREAS - Any site within an area under a prescription which requires a modification to that prescription in order to suitably address the needs of the site.

SPECIES DIVERSITY - The amount of variety of life forms associated with an area. Often used as an indicator of the health of an ecosystem.

STAND - A contiguous group of trees sufficiently uniform in age class distribution, composition, and structure, and growing on a site of sufficiently uniform quality, to be a distinguishable unit.

Mixed Stand - A stand in which there is a mixture of species.

Pure Stand - A stand composed of essentially a single species.

Stratified Mixture - A stand in which different species occupy different strata of the total crown canopy.

STAND CONVERSION - A prescription advocating the removal of a dominant existing species in order to favor another species better suited to the site which may be either currently absent or suppressed.

STAND DENSITY - A quantitative, absolute measure of tree occupancy per unit of land area in such terms as numbers of trees, basal area, or volume.

STAND IMPROVEMENT - A term comprising all intermediate cuttings made to improve the composition, structure, condition, health and growth of even or uneven-aged stands.

STAND PRESCRIPTIONS - A written evaluation of a forest stand including directions and guidelines to be applied in order to change the condition of the stand to some desired condition as expressed in the management plan.

STEM - The main ascending axis of a plant, a stalk or trunk.

STEWARDSHIP - The integration of managing, growing, nurturing and harvesting of trees for useful products with the conservation of soil, air and water quality, wildlife and fish habitat and aesthetics. A management ethic advocating practices designed to improve a resource.

STOCKING - An indication of growing-space occupancy relative to a pre-established standard. Common indices of stocking are based on percent occupancy, basal area, relative density and crown competition factor.

STRATUM (canopy layer) - A distinct layer of vegetation within a forest community.

SUBCLIMAX FOREST - The stage in forest succession immediately preceding the climax forest.

SUCCESSION (ecological) - A process of community development that involves changes in species structure and community processes over time.

SUCCESSIONAL STAGE - One in a series of usually transitory communities or developmental stages that occur on a particular site or area over a period of time. Eventually, on most sites, a relatively stable, self-perpetuating stage, called a climax, is attained.

SUSTAINABLE - To produce a steady predictable quantity of all resources over time.

THREATENED SPECIES - One which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range. This species may be rare but relatively stable in its population size, or it may be fairly common but declining rapidly.

THINNING - A cutting made to reduce stand density of trees primarily to improve growth, enhance forest health, or to recover potential mortality.

TIMBER COVER TYPES - A descriptive classification of forest land based on present occupancy of an area by commonly recognizable combinations of tree species.

TIMBER SIZE CLASS - A descriptive classification grouping a broad range of tree sizes together based on the common utility of trees within that range.

TOLERANCE, SHADE - The relative capacity of a plant to become established and grow in the shade.

TREE - A usually tall, woody plant, distinguished from a shrub by having comparatively greater height and characteristically, a single trunk rather than several stems.

TREE SHELTERS - A translucent plastic tube supported by a stake, placed around tree seedlings. Shelters protect seedlings from deer and small mammal damage and extremes

in environmental conditions, thereby boosting the seedlings chances of survival and usually enhancing the growth rate.

TWO-AGED STAND - A stand composed of two distinct age classes that are separated in age by more than 20 percent of rotation.

UNEVEN-AGED STAND - A stand of trees of three or more distinct age classes, either intimately mixed or in small groups, separated in age by more than 20% of the rotation.

UNDERSTOCKED - A stand with any combination of basal area and stems per acre insufficient to optimally utilize the available growing space by the trees present.

VEGETATIVE COVER - The composite of all plant life on a given site.

VERTICAL STRUCTURE - The layering effect of plants in a stand, determined by different growth forms; trees, vines, shrubs, herbs, mosses and lichens and by the distribution of different tree species having different heights and crown characteristics and different ages of the same species. Multiple vegetative layers; overstories with rich species composition and well developed herbaceous shrub understory and woody mid-story layer.

WATERSHED - The entire area contributing to the supply of a river or lake; a drainage area. The entire area of land upon which the excess water (runoff) enters a common stream.

WETLANDS - Lands transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered with shallow and sometimes temporary waters, at least part of the year.

WILDLIFE RESOURCES - Wild animals, wild birds and wildlife as defined in WV Code §20-1-2.

WORKING FOREST - Any boundary of forest land managed as a unit which is subject to active management including the use of silvicultural practices designed to manipulate the vegetative cover to create conditions desirable or not otherwise found on the forest.

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