

West Virginia's Forest Resource

FACT



Some useful
facts about
West Virginia's
hardwood
forests

from the
West Virginia
Forestry Association

Ideas that keep growing.

BOOK

FOURTH
EDITION

ABOUT WVFA

The West Virginia Forestry Association is a non-profit organization funded by its membership. Members strive to protect the environment, while ensuring the sustainability of West Virginia's forests through multiple-use management.

The Association promotes professional forestland management, including improved fire protection and suppression, ecosystem conservation, noxious plant and insect suppression, expanded tourism, and recreational use of the West Virginia woodland resource.

Specific Objectives:

Promote a better public understanding of the dynamic character and potential of the forest as a sustainable, renewable natural resource.

Promote public awareness of the extent of the West Virginia forest industry; stimulate an interest in forest management and product manufacturing; and encourage more efficient use of the forest and its products for the benefit of the West Virginia people, economy and environment.

Conduct educational programs and encourage practical research on forestland management to help meet future needs.

Offer the opinions and advice of the membership as a collective voice on policy and research affecting the development of West Virginia's renewable forest resource.

TABLE OF CONTENTS

Wood Products & Our Everyday Living	2
West Virginia's Forest Products Industry	3
Wood - Our Renewable Resource	4
Will West Virginia Run Out of Trees?	5
Renewing the Forest	6
Who Owns West Virginia's Forests?	7
Wildlife <i>and</i> Forestry?	8-9
Do Forests Prevent Flooding?	10-11
Wildfire - Are We Destroying Our Future?	12-13
National Park or National Forest?	14-15
West Virginia's State Forests and Parks	16-17
Logging Regulations	18
The Sustainable Forestry Initiative® (SFI®)	19
West Virginia Tree Farm® Program	20-21
West Virginia Project Learning Tree	22-23
References	24

ISSUE:

Trees give us lumber, paper and furniture, but are there more benefits?

FACTS:

- Trees provide more than 5,000 wood and paper products that make our lives better.¹⁰
- Ice cream and salad dressings use part of the tree called cellulose to make them thick, smooth and creamy.
- Some fabrics, such as rayon, are made from tree fibers.
- Tires, steering wheels, and molded armrests in cars and trucks are all made from trees or wood by-products.
- Some trees contain substances with medicinal values and are used to make aspirin, asthma medications, cough remedies, and anti-cancer drugs.
- The average American uses the equivalent of an 18-inch dbh, 100-foot tree every year.¹⁰
- An acre of trees can remove about 26,000 pounds of dust and gases every year from the surrounding environment.¹⁵

ISSUE:

Appalachian people have been dependent on our forests for various products since the first settlers arrived. Is the forest products industry still important to West Virginians?

FACTS:

- The forest products industry is the only natural resource industry that extends into every West Virginia county.
- The forest products industry in West Virginia provides jobs for 30,000 workers.⁸
- Since 1987, the forest products industry has grown from a \$950 million to a \$4 billion industry.⁸
- The state of West Virginia collected nearly \$3 million from timber severance taxes in 2005.⁸

ISSUE:

Wood products are both functional and beautiful, but are they environmentally friendly products?

FACTS:

- Our forest products come from a renewable resource that grows and replenishes itself generation after generation.
- Wood is durable and recyclable, as well as biodegradable. Finished wood products can last for many years, but wood - from the tree to the house - also returns to the earth as ashes or decaying material when its purpose is fulfilled.
- New technology has eliminated virtually all wood processing waste. This means that all of the tree is used: bark, dust, chips, slabs and lumber.
- Tree tops and leaves left in the woods after harvesting provide wildlife habitat and nutrients for the new forest.
- Wood is man's preferred building material; and the production of wood products consumes far less energy and clean water than does the production of steel and other building materials.¹⁴
- Trees, like all green plants, use carbon in their life processes. The soaking up of carbon by trees from the atmosphere helps to lower greenhouse gas buildup and is called *carbon sequestration*.¹⁶

ISSUE:

News reports often paint the picture of a treeless future for West Virginia. What are the facts?

FACTS:

- According to the USDA Forest Service inventory, West Virginia has 7 million more acres of forested land than it did in 1910.⁵
- West Virginia's forests had 18 billion board feet of sawtimber in 1949. In 2000, sawtimber volume had increased to 71.4 billion board feet - that's nearly four times as much.¹⁸
- The cycle of sustainable forestry depends on a full array of forest stand ages - not all young and not all old. West Virginia's forests are approaching that desirable balance that assures that for every tree harvested or lost to fire, old age or other natural causes, another tree just a little younger is ready to take its place.
- West Virginia ranks third in the nation, behind only Maine and New Hampshire, in the percentage of forested land.⁵
- Twelve million of the 15.4 million acres, 78 percent, in West Virginia are forestland.¹⁸
- West Virginia's forests are at least 94% hardwood species (e.g., maple, oak, yellow-poplar, walnut).⁸

ISSUE:

With thousands of trees being cut every day, how can we be sure that there will be trees for our future?

FACTS:

- The harvesting of trees allows new, young, vigorous plants, shrubs and seedlings to flourish in areas where larger, more mature trees had shaded their growth.
- Increased sunlight stimulates the growth of seedlings on the forest floor, allowing them to regenerate naturally.
- In addition to natural regeneration, more than one million tree seedlings were planted on surface-mined land in West Virginia in 2005.¹¹
- Forest management makes use of natural biological processes to even out the “up and down” cycle and ensure a long term, continuous supply of wood, water, wildlife and recreation.

ISSUE:

Why should I worry about West Virginia’s forests? I only own a few acres. Talk to the big timber companies, they own thousands of acres.

FACTS:

- The majority, 79%, of West Virginia’s forests are owned by farmers, individuals and other nonindustrial private landowners.¹⁸
- The government, at various levels, owns slightly less than 12% of West Virginia’s forestland.¹⁸
- Wood product companies, including sawmills and finished product manufacturing firms, own only 9% of the forestland in West Virginia.¹⁸
- Therefore, wood product companies rely heavily on nonindustrial private landowners for their wood supply and could not survive without them.
- Currently, more than 80% of the timber harvested in West Virginia comes from nonindustrial private landowners.⁸

ISSUE:

I really love to hunt and fish, but doesn't timber harvesting destroy our wildlife populations?

FACTS:

- Timber harvesting is an important tool for the creation of diverse wildlife habitat, which increases wildlife populations.
- West Virginia is home to an abundance of wildlife. In fact, the West Virginia Division of Natural Resources reports that current wildlife populations are at an all time high for game, nongame and fish species.⁷
- Before the mid-1900s, deer harvests in West Virginia never surpassed 1,000 animals. Today, hunters enjoy some of the best deer hunting success in the nation with an annual harvest of approximately 250,000.⁷
- According to the West Virginia Division of Forestry, the majority of West Virginia timber harvests are partial harvests less than 200 acres in size. The variety of ages and sizes of trees in the forested areas, along with open areas such as hayfields, pastures, lakes and ponds, creates a diverse landscape that provides habitat for all types of wildlife species.
- West Virginia's forestlands provide more than 400 native brook trout streams. In addition, the West Virginia Division of Natural Resources stocks nearly 200 waters (all dependent on forests) with various species of trout each year.⁷
- Timber harvesting creates openings that allow grasses, berries, new tree seedlings and other early successional plants to grow, creating a condition that is critical to the habitat of turkey, grouse, rabbit, and many other wildlife species.
- The return of the wild turkey is one of the great wildlife management success stories in West Virginia. Today, through scientific wildlife management and proper timber management, wild turkeys are found in abundance statewide, with wildlife biologists estimating their numbers to exceed 150,000 birds.⁷
- West Virginia's diverse forestland provides some of the best habitat in the eastern U.S. for neotropical migratory song birds.
- The Wildlife Resources Section of the West Virginia Division of Natural Resources conducts fish and wildlife management activities on nearly 500,000 acres of Wildlife Management Areas and State Forests; 1.2 million acres of National Forest lands; 21,000 acres of public impoundments and 100,000 acres of fishable streams and rivers.⁷

Do Forests Prevent Flooding?

ISSUE:

Flooding has increased in the valley where I live since timber companies began to harvest the trees. Is this a cause and effect relationship?

FACTS:

- U.S. Government and University research personnel have repeatedly shown that the practice of cutting trees, no matter how many, in managing forestlands, does not cause flooding.¹⁹
- A flood occurs anytime that surface water flow is greater than stream capacity. This will occur when an excessive amount of rain falls in a short period of time (e.g., several inches in 3-4 hours).⁵
- Forestland has an exceptional ability to absorb rainfall. As rain falls to the ground, the water flows underground, through soil pores and channels that are created by dying and decaying roots, to the stream.²⁰
- Studies conducted on West Virginia forestlands have shown that water can infiltrate forest soils at a rate of 19 inches per hour to as much as 260 inches per hour.^{19,21}
- Rainfall does not infiltrate road surfaces as readily as it does the undisturbed forest floor. Foresters construct forest roads to ensure that water is quickly directed off of the road surface and back into the undisturbed forest soil.²⁰
- On a steep slope, with roads at various levels on the hillside, the same water may be infiltrated four to five times as it descends the slope.²⁰
- Trees use water from the soil and pass it into the air as vapor through a process called evapotranspiration. This occurs only during spring and summer when green plants, including trees, are growing.
- For a short time after trees are harvested, moisture that would have entered the atmosphere as water vapor ends up in the stream system. The increase is both small and brief, lasting only a few years, until the natural regrowth of trees, shrubs and grasses begins, once again, to take up the additional moisture.

ISSUE:

I hear a lot of talk about wildfires, but do they really cause that much damage?

FACTS:

- In 2005, there were 744 wildfires that burned more than 15,000 acres of West Virginia woodland, and caused more than \$4.5 million in damages.⁸
- Wildfire not only kills trees, but it destroys and damages all facets of the forest ecosystem. Burned and damaged trees become more susceptible to disease and homes for wildlife are destroyed. These wildfires cause severe soil erosion resulting in pollution and sedimentation of streams. The smoke and ash from these wildfires also cause varying degrees of air pollution.
- Although every county in West Virginia is susceptible to wildfires, the largest wildland fires occur in 14 southern counties, a pattern that has not changed in the past 70 years.
- In 2005, 41% of the wildfires in West Virginia were caused by debris burning. The second leading cause was arson at 31%, followed by equipment (15%), miscellaneous (6%), children (2%), smokers (2%), campfires (2%), and railroad (1%).⁸
- Underground mine fires, which are listed under "miscellaneous" causes, are a low percentage of the total number of fires but a very large amount of the acreage burned.⁸
- Trees that have been burned in the past appear to be healthy and green, but damage has occurred, and it may be 20 years before the trees begin to die. During this time, these trees are decaying inside. These trees eventually fall and can never be harvested for quality timber.

National Park or National Forest?

ISSUE:

Aren't National Parks and National Forests basically the same thing?

FACTS:

- National Parks and National Forests are totally different entities.
- National Parks were established to preserve natural features and areas of exceptional beauty or historical interest. Examples of National Parks include the Grand Canyon and Yellowstone.
- National Forests were established “...to furnish a continuous supply of timber for the use and necessities of citizens of the United States...” and to improve and protect the forest, securing favorable conditions of waterflows.³
- The U.S. Forest Service provides for sharing a portion of revenue from commodity receipts (timber sales, grazing, minerals, and recreation use) to counties in proportion to the number of acres of National Forest land within each county.
- These funds are primarily designated to use for schools and roads.
- Prior to 2001, this was a straight 25% of the gross receipts. Reduced timber harvesting necessitated new legislation to provide counties with appropriated money to offset reductions in payments.
- In 2003, West Virginia counties received \$1,269,762 from Forest Service receipts of timber sales, grazing leases, recreational use fees and other land uses.⁵
- West Virginia contains one entire National Forest, the Monongahela, and portions of two others, the George Washington and the Jefferson. Together, these comprise over one million acres of forested land.⁶
- National Forests are administered by the U.S. Forest Service, an agency of the U.S. Department of Agriculture.
- Hunting and trapping are prohibited in National Parks, but encouraged in National Forests.
- Nationwide, there are 188 million acres of National Forests and 84.4 million acres of National Parks.
- National and State Parks do not pay annual fees or taxes. These lands are effectively removed from the tax base.

ISSUE:

Are State Forests and State Parks similar to National Forests and National Parks?

FACTS:

- State Forests and State Parks have similarities to our National Forests and Parks, but there are differences.
- State Forests are established to serve as demonstration areas using proper forest management practices to achieve multiple uses and benefits of the forest resources.
- Forest management and hunting are allowed on most areas within our State Forests.
- Monies derived from the sale of forest products from State Forests go into a Special Account, primarily for Division of Forestry fire prevention and suppression expenses. At least 25% of this revenue can be returned to that State Forest for the enhancement of the overall forest resources.
- The West Virginia Division of Forestry manages more than 70,000 acres of State Forest lands, utilizing principles of sustainable forestry to achieve and provide multiple uses including recreation opportunities and wildlife habitat enhancement.⁸
- State Parks are established by law to promote conservation through the preservation of areas of natural, historical, aesthetic or archeological significance and to provide affordable outdoor recreation for West Virginians and their visitors.
- The West Virginia Division of Natural Resources, Parks and Recreation Section administers State Parks and the improved recreation areas on State Forests and Wildlife Management Areas. DNR Parks also has law enforcement responsibilities within the entire boundary of these areas.

ISSUE:

*I have noticed there are a lot of log trucks on the highways.
Are there laws that regulate the timber industry?*

FACTS:

- West Virginia passed the Logging Sediment Control Act (LSCA) in 1992.
- The LSCA requires logging companies to follow strict procedures when conducting a timber harvest. These include obtaining a logging license, completing a training program, filing a timbering operation notification, and using best management practices (BMPs).
- The West Virginia Division of Forestry (WVDFO) is the agency assigned the enforcement responsibilities of this Act.
- The WVDFO inspects logging sites to assure compliance with the LSCA. A violation of this Act can lead to suspension of the job, to license suspension and incurring substantial fines.
- In addition to the LSCA, logging companies must also comply with additional regulations at both the state and federal level.
- At the federal level, the Occupational Safety and Health Administration (OSHA) Logging Standard mandates specific requirements to ensure employee safety.

ISSUE:

I've heard people talking about SFI®, what is it?



FACTS:

- The purpose of the Sustainable Forestry Initiative (SFI) is to promote sustainable forestry practices to produce healthy, productive forests for the future.
- The SFI is a national program created by the American Forest and Paper Association (AF&PA) in 1995.
- An independent Sustainable Forestry Board (SFB) provides oversight and direction to the SFI. The SFB has five members from each of the following sectors: environmental/conservation; the broader forestry community, such as academia and governmental agencies; and member companies.
- The SFI principles, among other things, encourage landowner education, logger training, and public awareness of sustainable forestry principles.
- The SFI program is coordinated at the state level by the West Virginia Forestry Association and implemented through state-specific activities and programs.

ISSUE:



I've heard about Tree Farms. They're like pine plantations or Christmas tree farms, right?

FACTS:

- The American Tree Farm Program is a national program that recognizes forest landowners, who own 10 acres or more, for the stewardship and sustainable forest management practices they perform on their land.
- The National Tree Farm Program is administered through the American Forest Foundation. Tree Farm certification is available at no cost to the forest landowner.
- The Tree Farm Program is the oldest certifier of forestland in the world, having been in existence since 1941.
- West Virginia has nearly 700 certified Tree Farms which encompass 1.0 million acres.¹³
- In 2003, West Virginia celebrated the 55th Anniversary of the Tree Farm Program in the state.
- 2006 marked the 65th Anniversary of the national Tree Farm Program.
- Certified Tree Farms are inspected by professional foresters to determine if forest practices on the property warrant continued certification. These foresters volunteer their time to the Tree Farm Program.
- The Tree Farm Program's purpose is to encourage forest landowners to manage and protect their lands while enjoying the added benefits of improved food and habitat for wildlife, watershed protection, and recreation.
- Although Christmas tree farms are often certified as Tree Farms, most Tree Farms in West Virginia are hardwood stands composed of oak, maple, hickory, yellow-poplar and other hardwood trees.
- The West Virginia Forestry Association is the state sponsor of the Tree Farm Program.

ISSUE:



With more and more children being raised in cities and towns with little understanding and appreciation for nature, is there a program that can assist teachers in helping children understand the dynamics of forests?

FACTS:

- Project Learning Tree (PLT) is an award winning, environmental education program designed for teachers and other educators working with students in grades K-12.
- PLT uses the forest as a “window” into the natural world, helping young people gain awareness and knowledge of the world around them, as well as their place within it.
- PLT began in West Virginia in August 1979.⁴
- PLT provides more than 175 interdisciplinary, instructional activities for use in environmental education programs.⁴
- PLT provides workshops and in-service programs for teachers, foresters, youth group leaders, resource managers and others.
- In West Virginia, nearly 300 people have been certified as workshop leaders and more than 5,000 teachers and youth group leaders have attended the local workshop training.⁴
- Nationally, PLT is sponsored by the American Forest Foundation (AFF) and the Western Regional Environmental Educational Council (WREEC).
- In West Virginia PLT is sponsored by the West Virginia Forestry Association and the West Virginia Division of Forestry, with support coming from the West Virginia Conservation Education Council and U.S. Forest Service – State and Private Forestry.
- To find out more about the PLT program, call the phone number on the back of this booklet or visit the national PLT website at www.plt.org.

References

- 1 *Economic Impact of the Wood Products Industry: West Virginia 1995*, Bureau of Business and Economic Research, College of Business and Economics, West Virginia University, David Greenstreet and Raymond Cardwell, Jr., June 1997.
- 2 *Forest Inventory Survey*, USDA Forest Service, 1988.
- 3 Organic Act of June 4, 1897.
- 4 *Project Learning Tree*, 2006.
- 5 USDA Forest Service, 2006.
- 6 *West Virginia Blue Book*, 1998.
- 7 West Virginia Division of Natural Resources, 2006.
- 8 West Virginia Division of Forestry, 2006.
- 9 *West Virginia Tree Farming*, 2003.
- 10 American Forest Tree Association, 2000.
- 11 West Virginia Coal Association, 2006.
- 12 *Report of the President's Advisory Panel on Timber and the Environment*, 1973.
- 13 West Virginia Tree Farm Committee, 2006.
- 14 Canadian Wood Council, 1994. Technical Bulletin No. 2: Environmental Effects of Building Materials.
- 15 The American Forest Foundation.
- 16 Tree Farmer Magazine, March/April 2000, "Harvesting the Benefits of Carbon Sinks."
- 17 West Virginia Development Office, 2003.
- 18 *Forest Statistics for West Virginia: 1989 and 2000*, USDA Resource Bulletin NE-157, June 2003.
- 19 Lull, Howard W.; Reinhart, Kenneth G. 1972. *Forests and Floods in the Eastern United States*. USDA Forest Service Research Paper NE-226.
- 20 *Woodlot Management: An Introduction to Water in the Forest*; West Virginia University Extension Service publication with assistance from the USDA Forest Service, Northeastern Forest Experiment Station, Parsons, WV.
- 21 Reinhart, Kenneth G. "Effect of a Commercial Clearcutting in West Virginia on Overland Flow and Storm Runoff." Journal of Forestry. March 1964.

This book compliments of



*This information is provided by the
West Virginia Forestry Association to
promote a better understanding of the
dynamic character of our forest resource.*



WEST VIRGINIA FORESTRY ASSOCIATION

Ideas that keep growing.

P.O. Box 718 Ripley, WV 25271
(888)372-WOOD (304)372-1957 Fax
www.wvfa.org