

STATE OF THE FOREST

2023
FISCAL YEAR

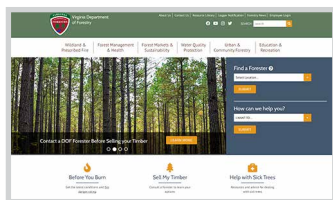
ANNUAL REPORT ON VIRGINIA'S FORESTS



VIRGINIA DEPARTMENT OF
FORESTRY

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Find more on the
DOF website

This annual report provides state fiscal year (July 1, 2022 - June 30, 2023) information unless otherwise noted.



FROM THE STATE FORESTER



Virginia State Forester Rob Farrell

Every day, the people of the Virginia Department of Forestry (DOF) work with partners and stakeholders – like you – to address challenging issues such as aging forests, deforestation, invasive insects and plants, development sprawl, industrial-scale solar facilities, and the related impacts to forest and agriculture lands. Although we have our fair share of challenges facing the forest, we have also been extremely fortunate to have unprecedented support in recent years at the federal, state and local level.

In Fiscal Year 2023 (FY23), DOF received \$6,600,000 from the Inflation Reduction Act via the USDA Forest Service. This historic allocation of funding, to be distributed over a four-year period, will enable us to implement tree-focused programs in communities across the Commonwealth that have historically been overburdened by pollution, environmental and socioeconomic factors. We also continue to collaborate with partners statewide to get more trees into the ground in riparian forest buffers to meet the state's 2025 commitments for Chesapeake Bay restoration.

Last December, DOF announced recipients for the 2022 Forest Sustainability Fund. One million dollars has been distributed proportionately to 68 Virginia localities to partially offset the reduced real estate tax revenue that results from forest land-use taxation. Localities will be able to use these funds for public education, outdoor recreation or forest conservation. Passed by the 2022 General Assembly, the fund assists localities that offer land-use taxation to forest landowners. Land-use taxation enables landowners to pay real estate taxes based on the productivity of their land for crop or timber production rather than on real estate market value. This results in lower taxes each year and enables many landowners to keep their land as farms or forests. Most of the forestland in Virginia is privately owned, but these millions of acres of forests provide environmental and health benefits for the public at large, such as cleaner air, healthier streams, drinking water and aesthetic beauty.

In FY23, the fall and spring fire seasons were more active in other parts of the U.S. than in Virginia. As part of a well-established national compact agreement, DOF was in a position to send 72 personnel to 14 other states to fill critical wildfire suppression and incident management positions. DOF firefighters were deployed to Arizona, California, Colorado, Florida, Georgia, Kentucky, Louisiana, Mississippi, Montana, North Carolina, Oregon, Pennsylvania, Texas and Washington. These opportunities help our responders gain invaluable experience managing large wildfire incidents and allows Virginia to pull in out-of-state resources in the event of a serious wildfire situation here.

Pursuant to House Bill 206 (Small renewable energy projects; impact on natural resources, report), DOF participated in a regulatory advisory panel (RAP) led by the Virginia Department of Environmental Quality (DEQ) to assist in revising the Solar Permit by Rule regulation related to impacts on prime agricultural soils and forest lands. DOF's role is to provide insight and expertise on forestry and potential mitigation strategies. DEQ successfully held five RAP meetings from June through September of last year. In summary, the RAP was successful in identifying key issues and a range of options for consideration. The final regulations are due by December 2024. Also, directed by House Bill 2026 (Renewable energy; biomass-fired facilities), DOF convened a work group this summer to study the carbon footprint of biomass electricity generation. DOF and stakeholders have taken on three tasks: perform a carbon life-cycle analysis, develop biomass best management practices (or BMPs), and convene an advisory panel. To begin, DOF focused efforts on the first phase of this work, performing a carbon life-cycle analysis, which will be incorporated into the BMPs. Several meetings were held this summer with other state agencies, industry, non-governmental organizations and members of the public, to set the stage for this important work, discuss challenges and hear from topic experts. DOF will next convene an advisory panel of agency and industry representatives and interested stakeholders to create and submit a report of the panel's findings and recommendations by Dec. 1, 2024.

FROM THE STATE FORESTER

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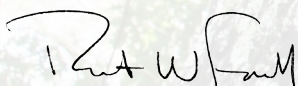
In FY23, DOF was proud to announce the Commonwealth's 200th conservation easement. Using funding earmarked to mitigate environmental impacts of the construction of Route 460 in southwest Virginia, DOF collaborated with The Nature Conservancy to help conserve more than 1,400 acres of managed forests and four miles of headwater streams. Specializing in the creation and stewardship of easements that conserve relatively large, connected expanses of managed forestlands, DOF's easement program maintains water quality and wildlife habitat, helps prevent flooding, and supports the Commonwealth's forest products economy. DOF looks forward to growing its easement program to ensure that our working farms and forests remain intact and healthy for the benefit of generations to come.

The agency's Forest Management Academy – a training program focused on strengthening the existing knowledge of seasoned field employees – resumed in FY23 after a 15-year hiatus. The 2022 academies – held in our Eastern and Western regions – included sessions on stand conversion, DOF research, forest and wildlife management, and tree improvement and pine productivity.

This summer, Governor Glenn Youngkin announced the establishment of the Virginia Security Corridor partnership and award of two federal Sentinel Landscape designations in eastern Virginia. The designations strengthen military readiness, conserve natural resources, and build working lands through integration of federal, state, local and non-governmental partnerships. The partnerships advance mutually beneficial land-use initiatives that complement Virginia's military, forestry, agriculture and recreation economies by connecting landowners with voluntary conservation easement assistance programs. Program management will be led by DOF with our important governance partners: the Agriculture and Forestry, Veterans and Defense Affairs, and Natural and Historic Resources secretariats.

By now it's likely clear to you that the scope of work generated by DOF didn't diminish in FY23. However, this year will always be remembered as the year the agency lost our first firefighter in the line of duty after more than a century. In March, Rocky Wood was tragically killed in an all-terrain vehicle accident while battling a 15-acre wildfire along Lester's Fork Road in Buchanan County. A seven-year DOF employee, Wood worked in the Western Region's Vansant Office. He joined the agency full-time as a forest technician in 2016, and prior to that, worked as a part-time wildland firefighter with the agency and for the Virginia Department of Corrections. In May, the Wood family joined us for a small ceremony at the Charlottesville headquarters where a white oak tree was dedicated to the memory of Wood's lifelong dedication to public service. We use a living tree as a symbol of our commitment to remember those that we have lost, and the enduring impact that they have had on the agency. This tragedy underscores the very real danger of our work as we fulfill our mission to protect life, land and property for all Virginians.

This State of the Forest report provides an annual look at the work and activities of DOF. On the pages that follow, you'll find details on many areas of interest to you such as forest health, forest management, invasive species, land conservation and, of course, water quality. Thank you for your partnership, interest and continued support of forestry in the Commonwealth.



Rob Farrell, State Forester

VIRGINIA FOREST TRENDS

Virginia Forest Cover and Types

DOF maintains an ongoing inventory program to ensure that our forests are being managed sustainably. DOF, in cooperation with the USDA Forest Service, conducts a forest inventory analysis (commonly called FIA) which is a primary source of statistics for the forestland in Virginia. The inventory collects and analyzes information on forest growth, forestland area, land use changes, ownership trends, and natural and human impacts to the forest.

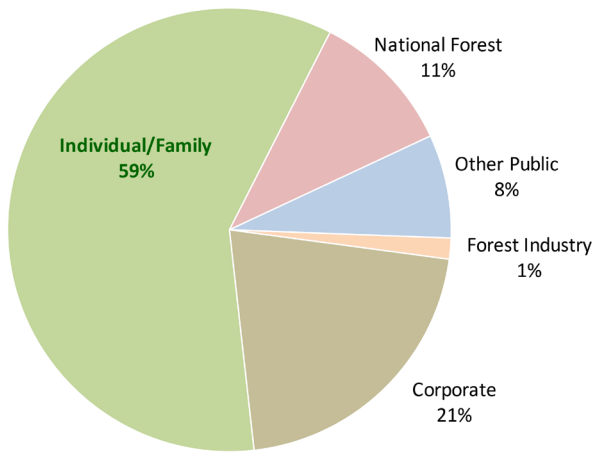
62% Forestland

16 million+ acres

79% Hardwood/
Hardwood-Pine

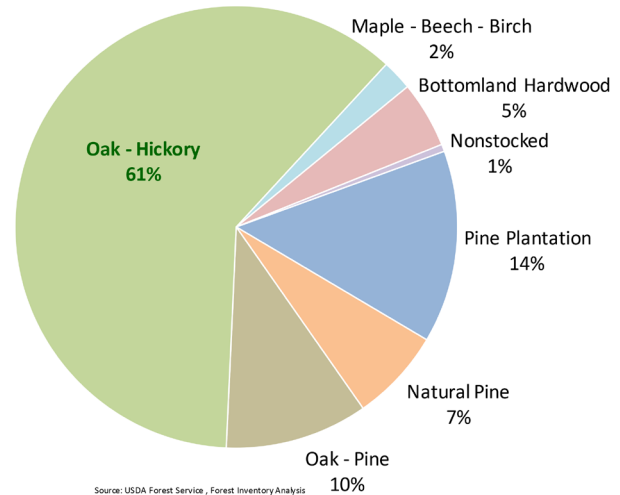
21% Pine

Forest Ownership in Virginia



Source: USDA Forest Service, Forest Inventory Analysis

Forest Types in Virginia

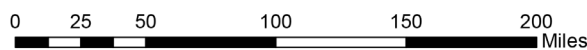
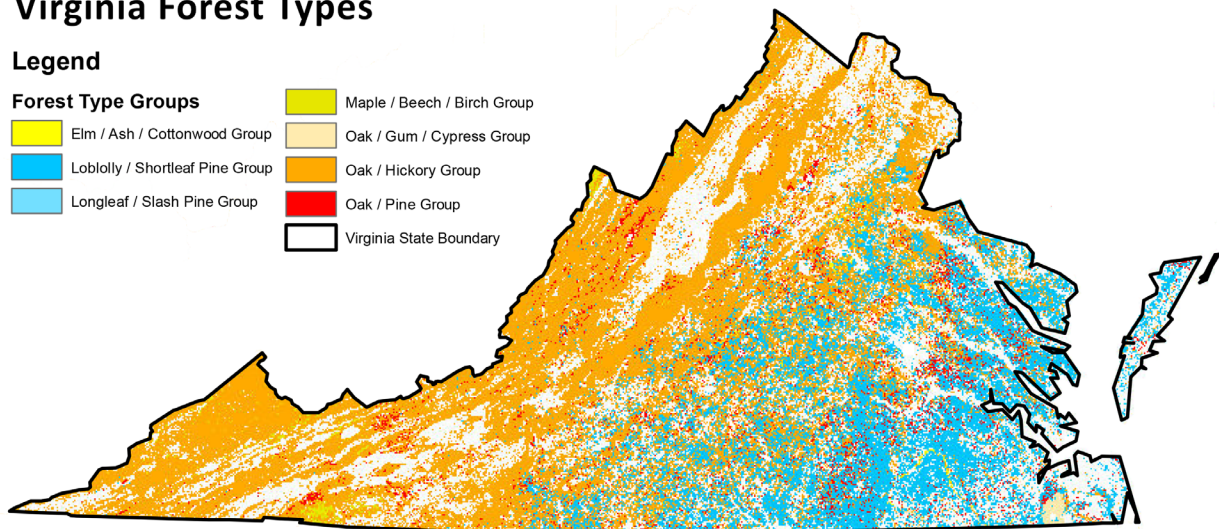


Source: USDA Forest Service, Forest Inventory Analysis

Virginia Forest Types

Legend

Forest Type Groups



USDA Forest Service, Forest Inventory Analysis

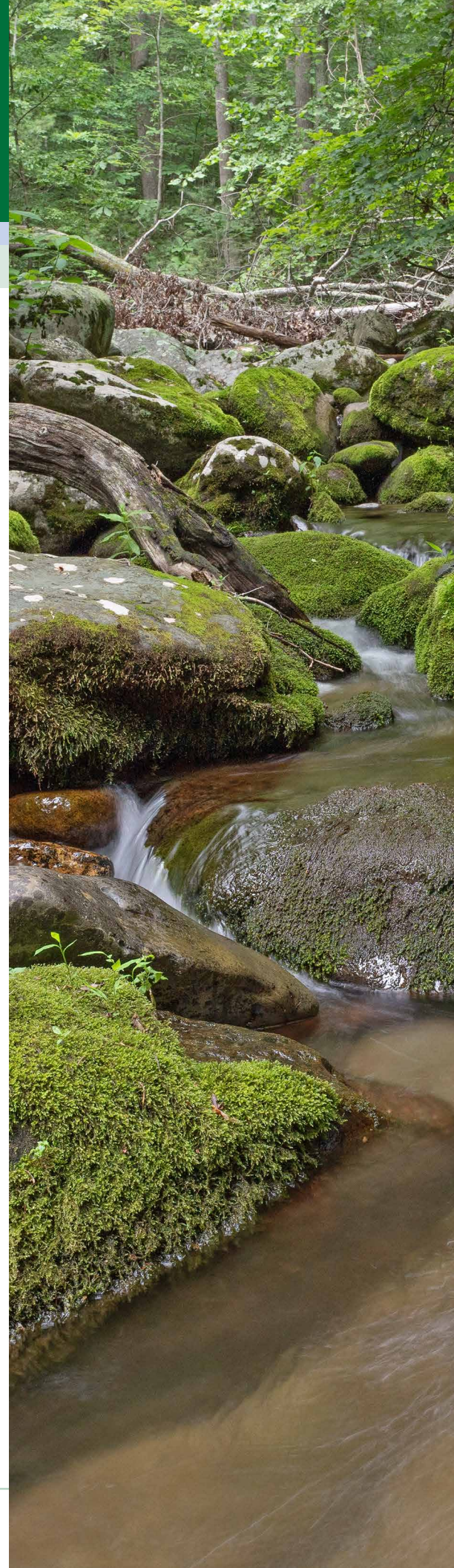
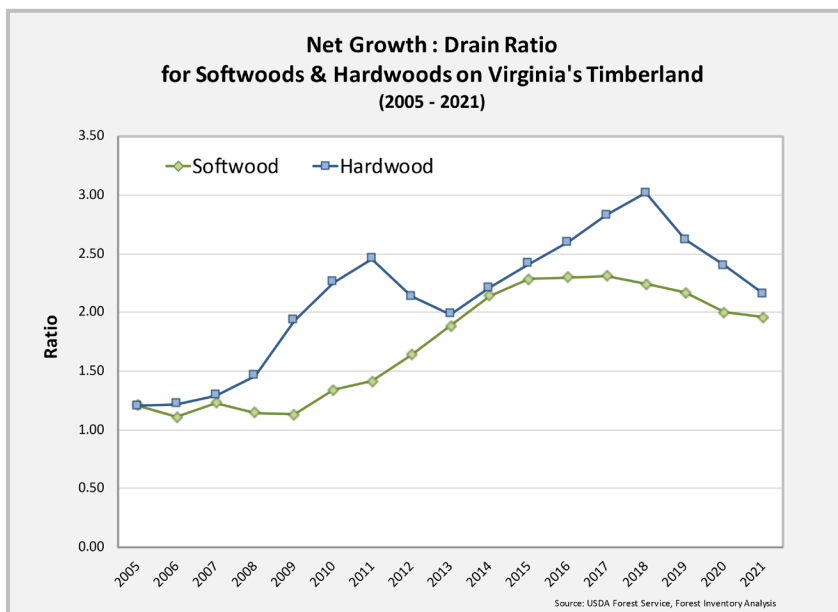
FOREST SUSTAINABILITY

Together, Virginia's forestry community has long demonstrated foresight and vision for the future of our forests. In the 1970s, the Commonwealth led the nation to invest in reforestation and protect water quality. Today, industry and landowners recognize that sustainable forest management remains critical for water quality protection, carbon sequestration, habitat and coastal resiliency. Stakeholders from a variety of sectors recognize the key role of forests in our nation's climate change response.

While landowners have many good reasons to own forestland (recreation, heritage, wildlife, conservation), economics significantly influence most management decisions. Providing landowners with multiple options for generating income from their forestland can ensure forests remain intact to support our economy, the environment and public health.

DOF recognizes that forest management goals and decisions are up to landowners, who collectively own approximately 80% of Virginia's forestland. Providing landowners with options for generating income can ensure that forests remain intact and healthy to support our economy, the environment, and Virginia's natural beauty. Good news... DOF is here to help.

DOF also monitors growth to drain ratios to gauge the balance of growth to utilization or loss of timber. Even with recent decreases, the chart below indicates a long-term trend of growth in our forest resources where growth is double removals.



FIRE & EMERGENCY RESPONSE



Wildfire Suppression

Preventing and suppressing wildfires throughout Virginia is one of DOF's founding principles. Each year, the agency suppresses 537 fires that burn 7,997 acres (10-year average). Additionally, each year, fewer than 60 homes and other structures are damaged or destroyed by wildland fire, and agency suppression efforts are also credited with directly protecting more than 460 homes and 280 other structures, collectively worth more than \$99 million (10-year average).

DOF is unique in the fact that all agency responders serve as combined firefighters, public safety officers and land management professionals. These distinctive

skills, working in alignment with local fire departments, help ensure an efficient and effective fire suppression organization in the Commonwealth.

Through a well-established national compact agreement to share resources, DOF also provides assistance to other state forestry agencies. These opportunities help responders gain invaluable experience managing large wildfire incidents and provide Virginia with out-of-state resources in the event of a serious wildfire situation. Under this agreement, states are reimbursed for all related expenses. During the last two decades, DOF response personnel have assisted with wildfire suppression in 29 other states, coordinated hurricane response across the southeastern U.S.,



By the Numbers

FY23 (07/01/2022 – 06/30/2023)

Fire Suppression	
596 ↘ wildfires (776 FY22)	6,916 ↘ acres burned (11,490 FY22)
\$4.2 million ↘ timber damaged (\$4.96 million FY22)	
59 ↘ homes/buildings damaged (115 FY22)	\$1.6 million ↘ homes/buildings damaged (\$4.3 million FY22)
2,007 ↗ homes/buildings protected (1,629 FY22)	\$99.5 million ↘ homes/buildings protected (\$129 million FY22)
Historic Fire Statistics	
537 average fires per year** (based on 10-year average)	7,997 average acres burned per year** (based on 10-year average)
3,697 most fires in a single year – 1941**	333,023 most acres burned in a single year – 1930**
386 least fires in a single year – 2019**	2,508 least acres burned in a single year – 2019**

** Data based on calendar year (CY) Jan. 1 - Dec. 31.

Firefighter Training

783 ↗ firefighters trained (764 FY22)	10,444 ↗ hours training (10,140 FY22)
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Dry Hydrant Grant Program

21 ↗ new dry hydrants installed (14 FY22)	12 ↗ dry hydrants repaired (8 FY22)
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Volunteer Fire Assistance Grant Program

138 ↗ volunteer fire departments awarded grants (136 FY22)	\$281,483 ↗ grant funding awarded (\$247,150 FY22)
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Federal Firefighter Property Program

14 ↘ pieces of equipment on loan to volunteer fire departments (52 FY22)

Suppression Resources

160 → 4x4 engines (160 FY22)	14 → wildland brush trucks (14 FY22)
89 → bulldozer/wildland fire plow units (89 FY22)	1,903 ↗ dry hydrants (1,882 FY22)

FIRE & EMERGENCY RESPONSE

continued



assisted with flooding emergencies, downed aircraft incidents, and lost and stranded citizen rescue.

DOF provides wildfire suppression and emergency incident management training to agency firefighters and collaborators to increase the state's overall capacity for wildland fire suppression. DOF's success in this area is only possible through a coordinated approach that relies heavily on the resources of Virginia's rural fire services.

The dry hydrant program provides state-level funding available through the Virginia Fire Programs Fund to install and repair dry fire hydrants throughout Virginia to aid firefighting activities. Dry hydrants draft water from adjacent water bodies (such as ponds and streams) in areas without conventional water mains and hydrants. DOF uses 100% of this funding to either repair existing hydrants or install new ones based on requests from local fire departments. Virginia has 1,903 dry hydrants across the state, which improves the available water supply, increases the Insurance Services Office (known as ISO) rating of fire departments, and decreases the rates insurance companies charge for homeowner's insurance.

Wildfire Prevention

DOF has a long-placed emphasis on wildfire prevention based on the proven theory that focusing resources on prevention early reduces the need for suppression resources later. The agency has a long history of prevention education, which focuses on helping citizens understand

how to prevent a wildfire from starting and spreading. Wildfire prevention actions are typically focused on preventing debris-burning fire escapes...Virginia's leading cause of wildfires. DOF supports careful outdoor burning completed in a safe and lawful manner. Agency prevention efforts also focus on helping homeowners in wildland urban interface areas take steps to reduce potential damage to their homes. This program, called "Firewise Virginia," works to target the agency's limited resources on the highest-risk woodland home communities in the Commonwealth. Through outreach and education, DOF empowers homeowners to take steps to limit wildfire damage in high-risk areas.

Good Fire

One of the most effective tools for the management of Virginia's forests, grasslands and endangered species is "prescribed burning," which involves setting intentional, controlled fires with specific management goals. Putting more than a century of fire management experience, knowledge, expertise and skills to good use, DOF provides prescribed burning education and assistance to landowners to encourage this valuable tool for reducing the potential for wildfires and enhancing fire's ecological benefits. By removing dead and overgrown vegetation, prescribed fires help prevent larger, more intense and increasingly dangerous incidents that destroy communities, cost billions of dollars in damages and response resources...and claim lives.



By the Numbers

FY23 (07/01/2022 – 06/30/2023)

Prescribed Burning Program

351 ↗

prescribed burns conducted
(279 FY22)

6,819 ↗

acres prescribed burned
(6,649 FY22)

Firewise USA Community Program

44 ↗

nationally-recognized Firewise USA communities
(37 FY22)

Firewise Virginia Community Hazard Mitigation Grant Program

15 ↗

grants provided for wildfire risk reduction in woodland home communities
(14 FY22)

\$257,480 ↗

grant funding awarded
(253,325 FY22)

FOREST MANAGEMENT



Forest management can be described as providing the proper care to ensure the forest remains healthy and vigorous, and achieves the objectives of the landowner as well as society. Forest management is one of DOF's core principles, and our staff provide direct technical assistance, guidance and resources to forest landowners, partners, localities and other agencies.

Forest Management Plans

Foundational to effective forest management is proactive planning, which increases production and ensures resource sustainability on private and public lands. The end goal is tangible, on-the-ground work that improves forests. "It all starts with a plan" and "Learn, Plan, Act" are catch phrases

in the forest management community. DOF field staff and other resource professionals assist forest landowners in plan development based on ownership objectives. Plans cover a wide variety of purposes. Examples include plans for brief forest stands, specific focused practices and comprehensive tract-wide approaches, all of which DOF staff prepare and deliver on a continuing basis.

In FY23, DOF was involved in plans with 3,565 landowners on 157,340 acres (including stewardship plans). For newer landowners and those without forestry knowledge, plan development often results in a "light bulb" moment, shining light on possibilities they didn't know existed.



By the Numbers

FY23 (07/01/2022 – 06/30/2023)

Reforestation of Timberlands Program

1,081 ↗
landowners participated
(1,015 FY22)

50,190 ↗
acres improved
(47,531 FY22)

81,646 ↗
practice acres
implemented
(74,702 FY22)

Note: A single stand may have multiple practices done on the same acres.

Tree Planting

78,539 ↗
acres planted
(77,796 FY22)

1,515 ↗
planting projects
(DOF involvement)
(1,316 FY22)

55,595 ↘
acres planted
(DOF involvement)
(55,753 FY22)

Forest Stewardship Program

181 ↘
forest stewardship plans
written
(216 FY22)

30,234 ↘
acres included in plans
(30,851 FY22)

6 ↗
properties achieved
stewardship certification*
(5 federal FY22)

1,044 ↘
acres certified*
(1,118 federal FY22)

Other Management Plans

3,478 ↗
other management
plans written
(3,468 FY22)

115,917 ↘
acres included in plans
(125,980 FY22)

Note: Plans included are alternate management plans, cost-share plans, pre-harvest plans, prescribed burn plans, stand plans, tract plans (county land, land use, state lands, state lands (non-DOF), and Tree Farm plans.)

Diminished Species Restoration

28 ↗
shortleaf pine projects
(22 FY22)

884 ↗
acres shortleaf pine
projects
(634 FY22)

13 ↘
longleaf pine projects
(30 FY22)

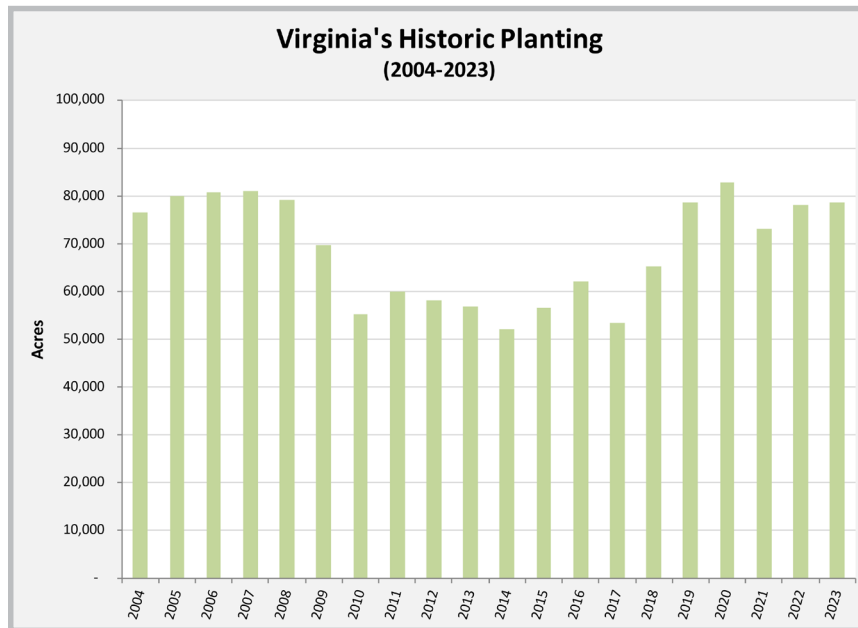
685 ↘
acres longleaf
pine projects
(1,412 FY22)

Note: FY23 figures include both planting acres and prescribed burning practices.

* Data based on federal fiscal year (FY) Oct. 1 - Sept. 30.

FOREST MANAGEMENT

continued



Training for professionals is one of the strategies in the Hardwood Initiative. A total of 83 DOF staff and 38 private consulting foresters participated in hardwood training in FY23. This included specialized training for use of the Hardwood Assessment Tool, a valuable resource that opens the door for participation in the Hardwood Cost-Share Program.

In FY23, forest landowners implemented a variety of hardwood improvement practices with assistance of cost assistance through Virginia’s program or USDA programs. Practices include crop tree release, timber stand improvement, prescribed burning, and non-native invasive plant species control. For some projects, the very best trees are designated and competition is removed to concentrate growth and vigor

Managing Hardwood Forests

DOF, through the Hardwood Initiative, is focused on growing and sustaining healthy hardwood forests for future generations. Comprising 80% of Virginia’s forests, hardwoods are a critically important part of the forest resource. Whether landowners are interested in wildlife habitat, commercial harvesting, or aesthetics, DOF, consulting foresters and loggers with specialized knowledge and experience in hardwood forestry, can help improve their forest land.

on crop trees. Trees are selected based on species and maintaining a healthy mixture of tree types. Control of non-native invasive species allows better native trees to survive and thrive.

Each project is shaping the forest to be more healthy, productive, valuable and aesthetically pleasing in the future. In addition to cost-share assistance, a state tax credit of up to \$1,000 helped offset costs not covered by cost share to those who implemented hardwood management practices. Qualified applicants can apply anytime during the year.



By the Numbers

FY23 (07/01/2022 – 06/30/2023)

Hardwood Management Program

73 ↗
projects
(56 FY22)

1,126 ↗
acres hardwood projects
(1,120 FY22)

16 ↗
hardwood demonstration
projects on state-owned
lands
(12 FY22)

83 ↗
DOF staff trained in
hardwood management
(34 FY22)

38 ↗
consulting foresters
trained in hardwood
management
(13 FY22)

Hardwood Incentive Program

17 ↗
projects completed
through the Hardwood
Incentive Program
(10 FY22)

323 ↗
acres hardwood projects
completed through the
Hardwood Incentive
Program
(213 FY22)

FOREST HEALTH



Healthy, well-managed forests are essential to our people, wildlife and economy.

DOF's Forest Health program protects and improves Virginia's forest resource through detection and prevention of major pests, pathogens, invasive plants and other disturbances. Through surveys, monitoring and data collection, DOF makes sound recommendations to land managers based on unbiased scientific data. Forest Health staff and our partners provide technical assistance, training, and outreach to landowners and the wider forestry community regarding pest identification and forest health concerns.

Aerial Survey

DOF's Forest Health program monitors Virginia's forest for large-scale forest disturbances. In 2023, 1,586,750 acres of forest land was surveyed for damage using national aerial survey standards. These aerial surveys revealed just over

26,000 acres with forest damage caused by saltwater intrusion along the coast, and approximately 37,000 acres with damage caused by the spongy moth, an invasive insect that feeds on foliage of oak trees and other hardwood species. This was



the second year that spongy moth defoliation was observed in the Shenandoah Valley. Healthy trees generally recover from one year of defoliation, but multiple consecutive years of defoliation may lead to long-term damage.

Integrated Pest Management

Protecting threatened tree species, such as ash and hemlock, is a priority for DOF. The Forest Health program strives to safeguard populations of threatened species on State Lands using an integrated pest management approach that often includes both chemical and biological control. In 2023, DOF staff treated 119 ash trees on state lands to defend against the emerald ash borer. In addition, DOF's ash treatment cost-share program provided financial assistance to landowners for the treatment of 261 ash trees. Parasitoid wasps – approved by USDA-APHIS as biological control agents for EAB – were released at three sites in Virginia. In total, 3,000 parasitoids were released.

DOF also adheres to an integrated pest management approach to control the hemlock woolly adelgid (HWA), an invasive insect that attacks hemlock trees. In 2023, DOF chemically treated 173 hemlock trees and released 2,317 biocontrol agents of HWA on state lands. Rockingham County's First Mountain State Forest was a release site for HWA predator *Laricobius* beetles and predator silver flies in 2023, after chemically treating select hemlock trees in 2021. If the HWA predators



By the Numbers

FY23 (07/01/2022 – 06/30/2023)

Emerald Ash Borer Program

261 ↗
ash trees treated*
(130 federal FY22)

58 ↗
applicants awarded*
(33 federal FY22)

119 ↗
ash trees treated
on state lands*
(94 federal FY22)

Hemlock Woolly Adelgid Program

173 ↗
hemlock trees treated on
public lands*
(118 federal FY22)

Non-Native Invasive Plant Program

1,615 ↗
acres of invasive plant
removal*
(1,279 federal FY22)

Pine Bark Beetle Pre-Commercial Thinning Cost-Share Program

2,609 ↘
acres of pine thinned*
(4,240 federal FY22)

Aerial Forest Health Survey Program

1,586,750 ↗
acres surveyed*
(1,159,290 federal FY22)

* Data based on federal fiscal year (FY) Oct. 1 - Sept. 30.

FOREST HEALTH

continued

establish populations as expected, further chemical control shouldn't be necessary. DOF works closely with Virginia Tech's beneficial insect lab to select release sites and monitor establishment of HWA predator beetles and silver flies.

Pine Bark Beetles

Some native pests can also be a concern for Virginia's forests. Several native pine bark beetles can cause significant damage to our pine resource. DOF's Pine Bark Beetle Prevention Program offers cost-share assistance to landowners and loggers for practices that reduce a pine stand's susceptibility to pine bark beetles. In 2023, a total of 2,609 acres of pine were thinned with financial assistance from DOF's pre-commercial thinning cost-share program. Since the program's inception in 2004, more than 72,000 acres of pine have been thinned with cost-share assistance from this Pine Bark Beetle Prevention Program, which is funded by a U.S. Forest Service Southern Pine Beetle grant.

A region-wide trapping program monitors populations of the southern pine beetle, the most destructive native forest insect in the southeast. In 2023, DOF staff placed 30 traps across 12 counties in high-risk locations in Virginia. The highest numbers were found in traps located in Cumberland, Hanover, Chesterfield, Gloucester, and King and Queen counties (Cumberland County in particular, is an area of concern...several small spots have been identified in Cumberland State Forest).



Invasive Plant Initiative

Non-native invasive plants continue to spread across the Commonwealth, often overcrowding and preventing the growth of native flora and regeneration in forests. Bipartisan Infrastructure Law funds from the USDA Forest Service have allowed DOF to implement an invasive species initiative with a focus on treatment and outreach. An outreach campaign was developed to increase awareness for invasive plants and provide instruction for identification and treatment. DOF created a series of videos highlighting various invasive plants and treatment methods in 2023. Demonstration sites on state lands were established to showcase different invasive plant removal techniques which will include herbicide, mechanical, and even goat grazing.

A major plant of concern in 2023 was wavyleaf grass, a relatively new invasive species whose distribution continues to spread throughout Virginia. Treating wavyleaf on trails and outlier populations will help slow the spread of this incredibly invasive plant. In 2023, 255 acres were surveyed for wavyleaf grass, and 57 were identified and treated. Signs were created for boot brush stations that encourage the public to "Wipe Your Feet!" before leaving DOF's state forests to prevent the spread of seeds into new areas. Preventing the introduction of invasive species is the most cost-effective means of avoiding – or reducing – the negative impacts of infestations.



URBAN & COMMUNITY FORESTRY



Fostering partnerships between government agencies, businesses, academic institutions, non-profit organizations, and localities to ensure community trees receive care long into the future is the core mission of DOF's Urban and Community Forestry program. DOF provides multi-lateral assistance – education, community engagement, tree selection and grants – to develop local programs and get trees in the ground...all to ensure canopy spread, retention and management.

A vital element in the ecosystem, trees provide shelter, food, and other benefits to communities. As populations in cities and towns continue to grow, creating and caring for our “green infrastructure” (like trees) is increasingly important. Simply said, trees help make cities more livable. They provide shade, clean air and water, and other useful benefits for human and environmental health.

Utilizing Trees to Mitigate Heat and Date Driven Solutions

Over the last three years, DOF's Forestry's Urban and Community Forestry program has utilized funding from the U.S. Forest Service to support efforts across the Commonwealth to mitigate “heat islands” in the most vulnerable areas. Heat islands are urbanized locations

that experience higher temperatures than other areas. Buildings, roads, and other infrastructure absorb and re-emit the sun's heat to a larger degree than natural landscapes such as forests and bodies of water.

In 2021, a partnership with the Virginia Foundation for Independent Colleges (VFIC) and the Science Museum of Virginia led to the largest heat island mapping study in the country. Ten heat vulnerability maps were developed through partnerships to identify hotter and low-canopy cover areas.

The heat island study effort was the first step in a multi-pronged approach to empower students to promote tree planting and outreach projects in communities disproportionately affected by extreme heat. Example projects included community tree giveaway events and plantings at neighborhood parks and schools. Some areas identified by the heat mapping also correlated with food desert maps identified by environmental justice screen tool produced by the Environmental Protection Agency. To target these concerns, some institutions led efforts to establish food forests in public areas that would be accessible to all within the community. One school in partnership with the participating city removed sidewalks to create more space for new street trees.



By the Numbers

FY23 (07/01/2022 – 06/30/2023)

Virginia Trees for Clean Water Program	
58 ↘ projects* (63 FY22)	\$852,749 ↘ awarded*(\$1,045,977 FY22)
Urban & Community Forestry Grant Program	
26 ↘ projects* (33 FY22)	\$476,574 ↗ awarded* (\$411,438 FY22)
Throwing Shade VA Program	
1,555 native trees and shrubs (new initiative, no data)	\$41,985 reimbursed to 3 participating nurseries (new initiative, no data)

Tree City/Campus/Line USA Programs

61 ↘
total Tree City USA
Communities
(62 FY22)

Fairfax Co.
Largest Tree City USA
(pop. 1,138,331 FY22)

**Surface Combat
Systems** (military base)
Smallest Tree City USA
(pop. 528 FY22)

10 ↗
total Tree Campus USA
Schools
(8 FY22)

5 →
total Tree Line USA
Utilities
(5 FY22)

Note: Tree City, Campus and Utilities are awarded in the year following the calendar year of their accomplishments (e.g., Communities received awards in FY23 for calendar year 2022 accomplishments.)

* Data based on federal fiscal year (FY) Oct. 1 - Sept. 30.

URBAN & COMMUNITY FORESTRY

continued



Between fall of 2022 and spring of 2023, 2,348 trees were established throughout these communities with the help of over 900 community volunteers. DOF staff were on-site for every community event to provide technical assistance and answer questions from the public. Individual projects were highlighted by positive media coverage in each of the participating communities.

Throwing Shade VA

In FY23, DOF partnered with three Virginia nurseries to launch a pilot program featuring discounts on native trees and shrubs. “Throwing Shade VA” offers customer discounts of \$25 on eligible trees valued at \$50 or more. The discount program incentivizes customers to purchase native species, which are adapted to their natural environment and thus more likely to thrive. Three nurseries responded to DOF’s request for participation: Burke Nursery & Garden Centre (Burke), Woodstock Gardens (Woodstock) and Coastal Landscapes & Nursery (Virginia Beach).

Funded through state water quality improvement funds, which DOF uses to reimburse participating nurseries for tree discounts, the program is available exclusively for retail sales (landscapers interested in using the program

must ensure customers receive the benefit of the reduced pricing). By scanning the tree tag QR code at the time of purchase, customers enter basic information (confidential) that helps DOF track the Commonwealth’s water quality improvement goals. In FY23, 1,555 native trees and shrubs were purchased/planted through the program, and over 500 individual customers benefitted. The planting locations included over 73 unique Hydrologic Unit Code (HUC 12) watersheds. These native trees will grow and provide shade, which lowers temperatures in areas with limited green space. This also provides vital information to inform agency decisions on allocating funding for additional planting projects. The successful program will be expanded to incorporate 10 nurseries in 2024.

Virginia Trees for Clean Water Grant Program

In FY23, DOF has announced the availability of approximately \$900,000 in grant funding through the Virginia Trees for Clean Water (VTCW) Grant Program. Supported by the Virginia Water Quality Improvement Fund, the VTCW Grant Program is designed to improve water quality by encouraging tree-planting efforts where they are needed most and raising awareness of their benefits. The recommended funding range for proposals is between \$1,000 and \$50,000 per project, and funds are distributed on a reimbursement basis. Grants are awarded to civic groups, communities, local governments, tribal organizations, non-profit organizations, neighborhood associations, public educational institutions, state agencies and volunteer groups.



URBAN & COMMUNITY FORESTRY

continued



Second Oldest Educational Institution in the U.S. Achieves Tree Campus Higher Education USA Status

The College of William & Mary has long been revered for its history, holding the title of the second oldest educational institution in the U.S. The Williamsburg college is also consistently ranked one of the most beautiful campuses in the nation, largely due to the grand mature trees across the landscape. This year, the College of William & Mary was recognized by the Virginia Department of Forestry and the Arbor Day Foundation for their work, achieving Tree Campus Higher Education USA status. As a part of their application, the campus landscaping department highlighted their recently developed urban wood utilization program. When trees reach the end of their biological life, pose a hazard after severe storms, or are removed for construction purposes, their wood is typically still of high quality and can be used to create new products. William & Mary is in the process of building their own campus solar kiln to dry wood and provide architecture students with class project opportunities.

Campus Urban Wood Utilization programs have been developing rapidly across the state. Also supported by DOF, the University of Virginia (UVA Sawmilling) has one of the most robust programs within the state. Leaders within the UVA urban wood utilization program have traveled to sister schools, including William & Mary, to share the possibilities of establishing similar programs.



Trees Virginia Educational Events

DOF has a long-standing partnership with the Virginia Urban Forest Council, Trees Virginia. Together, the entities host several educational workshops across the state covering the latest standard practices in arboriculture. The Waynesboro Tree Care Workshop held in the fall, as well as the Roanoke Tree Care Workshop held in the spring, drew over 300 participants from the Mid-Atlantic. These workshops are full-day events that include outdoor demonstrations and presentations from various professionals within the industry. Two roundtable events, the Northern Virginia Round Table as well as the Southeastern Virginia Roundtable, drew around 150 attendees (combined). The roundtable events serve as a deep dive with expert presenters to exchange ideas, discuss issues, listen to presentations and educate our community about trees and the important role they play in society. This year, the events centered around the health and regeneration of oak trees (Northern Virginia) and construction practices and landscape design around mature trees (Southeastern).

FORESTLAND CONSERVATION



Virginia’s 16 million acres of forestland sustain the Commonwealth’s economy, rural communities and overall environmental health. However, forestland losses due to rapid population growth, increasing solar facilities and development, place forests and their many benefits at risk.

DOF is committed to slowing the loss of valuable forestland by working diligently with landowners to help them keep their land “in forest” through management, estate planning and education. The agency and its many partners offer resources to help landowners take the first steps toward long-term retention...primarily by creating plans. This is important to all Virginians that enjoy the benefits of forests, because conservation doesn’t “just happen.” It requires planning and perseverance to protect forests in perpetuity. DOF’s Generation NEXT, Century Forest and conservation easement programs represent three of the agency’s strategies for keeping Virginia forested.

Generation NEXT

A joint effort between DOF and the Virginia Cooperative Extension (VCE) at Virginia Tech, the Generation NEXT program combats the loss of forestland and other rural lands in Virginia. The goal of the program is to keep Virginia’s family-owned forests intact, in forest, and in the family by encouraging and equipping forest landowners and their families to plan for the intergenerational transfer and future of their forests through thoughtful planning and difficult conversations.

The program educates landowners through workshops and trainings co-facilitated by natural resource professionals, attorneys and financial planners. Forest landowners are guided through program topics such as conservation, available legal



By the Numbers

FY23 (07/01/2022 – 06/30/2023)

Conservation Easement Program

6 ↗
easements added
(4 FY22)

4,113 ↗
acres added in easements
(2,211 FY22)

1 ↘
easement added in
the Chesapeake Bay
watershed
(3 FY22)

370 ↘
acres added in easements
in the Chesapeake Bay
watershed
(1,627 FY22)

3,798 ↗
forested acres added
in easements
(2,133 FY21)

19 ↗
miles of watercourses
added in easements
(16 FY22)

2.4 ↗
miles of watercourses
added in easements in the
Chesapeake Bay watershed
(10 FY22)

Legacy Estate Planning Workshops

108 ↘
participants trained in
legacy planning
(128 FY22)

Century Forest Program

56 →
properties with Century
Forest designation
(56 FY22)

17,249 →
acres with Century Forest
designation
(17,249 FY22)

Conservation Easement Portfolio

205 ↗
conservation easements
(199 FY22)

63 →
counties/cities
containing easements
(63 FY22)

94,817 ↗
acres in easements
(90,704 FY22)

86,175 ↗
forested acres in
easements
(82,377 FY21)

121 ↗
easements within
the Chesapeake Bay
watershed
(120 FY22)

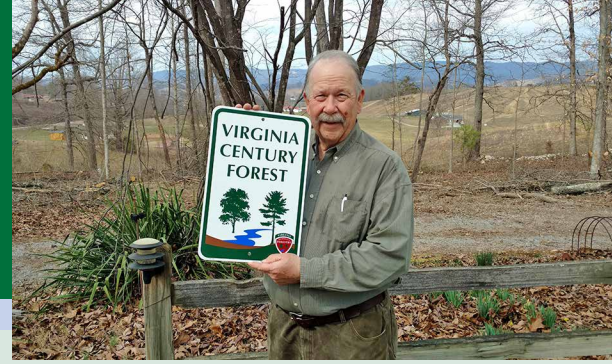
33,603 ↗
acres in easements within
the Chesapeake Bay
watershed
(33,233 FY22)

474 ↗
miles of watercourses
in easements
(455 FY22)

171.4 ↗
miles of watercourses
in easements in the
Chesapeake Bay watershed
(169 FY22)

FORESTLAND CONSERVATION

continued



resources and financial tools, and launches the difficult yet rewarding process to complete an estate plan (also known as a “legacy plan”). This year, DOF and VCE welcomed 108 participants to legacy estate planning workshops held across the state, including Charlottesville, Chatham and Richmond.

Conservation Easements

One way to keep Virginia forested is through conservation easements, which are voluntary perpetual agreements between landowners and a qualified conservation organization or public entity that limits development, while allowing continued private ownership and rural use, such as forestry or farming. Created in 2004, DOF’s conservation easement program specializes in the creation and stewardship of parcels that conserve relatively large, connected expanses of managed forestlands. These efforts help the agency maintain water quality and wildlife habitat, prevent flooding and support the Commonwealth’s forest products economy.

Forest Sustainability Fund

Passed by the 2022 General Assembly, the Forest Sustainability Fund assists localities that offer land use taxation to forest landowners. Land use taxation enables landowners to pay real estate taxes based on the productivity of their land for crop or timber production rather than on its real estate market value. This results in lower taxes each year and enables many landowners to keep their land as forests or farms. DOF and partnering localities, associations and Virginia Tech worked collaboratively to develop the process and methodology to distribute money from the Fund.

In FY23, the initial \$1 million allocation was distributed among 68 localities, with an average amount of \$15,000. The funds are being used for public education, outdoor recreation and forest conservation projects. The first year of the program proved to be a huge success and presents an important tool for forest landowners and farmers to help keep their land in production.



WATER QUALITY PROTECTION

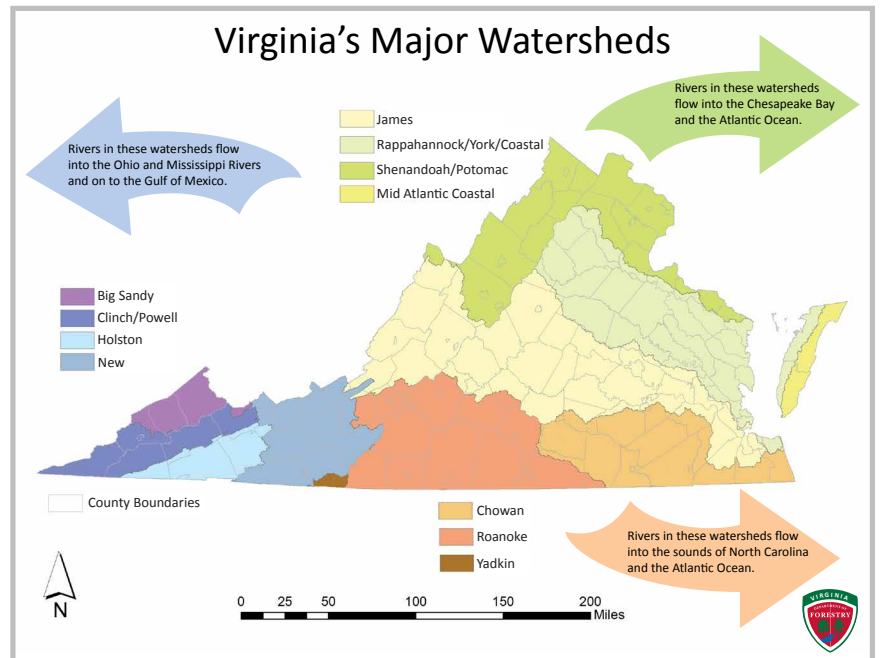


Watershed Forestry

DOF's Watershed program guides the agency's work on protecting and improving water quality through tree planting and sustainable forest management. In FY23, the Watershed team focused heavily on increasing riparian forest buffer establishment across the Commonwealth with particular emphasis within the Chesapeake Bay Watershed.

Simply defined, riparian forest buffers are trees growing near waterways. These trees act as filters, slowing and capturing nutrients (primarily nitrogen, phosphorus and sediment) before they reach the water. By keeping these nutrients on land, these buffers prevent excess nutrients from accumulating downstream. In addition to creating cleaner water for all, riparian forest buffers also provide other benefits including mitigating erosion, providing wildlife habitat, reducing flooding and many more.

To increase buffer establishment, the DOF Watershed program created resources to better connect landowners with best-fit cost-share opportunities, improved reporting and recording protocols, created agency field staff training opportunities, and collaborated with partners across the state to implement impactful projects "on the ground." As



a result of these efforts and the hard work of DOF staff, the agency recorded more than 800 acres of statewide buffer establishment in FY23, making this the most productive buffer year since 2016.

Virginia Security Corridor Partnership

In addition to the buffer initiative, the Watershed program will also be spearheading the agency's involvement with the Virginia Security Corridor Sentinel Landscapes efforts. In July 2023, Governor



By the Numbers

FY23 (07/01/2022 – 06/30/2023)

Riparian Buffer Establishment Program		James River Buffer Program	
285 ↗ riparian buffer establishment projects (154 FY22)	817.4 ↗ acres established (607.6 FY22)	39 ↗ riparian buffer establishment projects (32 FY22)	114 ↘ acres established (162 FY22)
179 ↗ riparian buffer establishment projects in Chesapeake Bay watershed (85 FY22)	469.6 ↗ acres in Chesapeake Bay watershed (438.5 FY22)		

WATER QUALITY PROTECTION

continued



Glenn Youngkin announced establishment of the Virginia Security Corridor partnership and award of two federal Sentinel Landscape designations in eastern Virginia. The partnership includes 10 military installations and covers 2.9 million acres that support mutual military, agriculture, and recreation land interests. Comprised of two designated landscapes along Virginia’s Golden Crescent, the northern landscape is named “Potomac,” and the southern, “Tidewater.” The Virginia Security Corridor partnership is home to some of the Commonwealth’s most abundant natural resources, which include productive forests, open and active agricultural lands, and complex marsh and riverine systems that all connect to the nation’s largest estuary – the Chesapeake Bay.

Protection During Timber Harvesting

DOF is responsible for promoting and enforcing the Virginia Silvicultural Water Quality Law (Code of Virginia §10.1-1181.1 through §10.11181.7). The agency develops best management practices (BMPs) for forest harvesting operations and works cooperatively with agencies and landowners throughout the Commonwealth to protect water quality. Staff inspects every harvesting operation within 20 days of the notification date and every 45 days thereafter through harvest completion. This program provides one-on-one contact between DOF and the harvest operators, which offers unique opportunities to provide education about BMPs and the latest techniques in water quality protection.



By the Numbers

FY23 (07/01/2022 – 06/30/2023)

BMP Audit Implementation		Logger BMP Cost-Share Program	
96.8% ↗ BMP implementation rate** (94.4% CY22)	97.7% ↗ BMP implementation rate in the Chesapeake Bay watershed** (95.7% CY22)	88 ↗ projects (24 FY22)	\$736,305 ↗ awarded to loggers (\$110,483 FY22)
Harvest Inspections		Sharp Logger Training	
3,319 ↗ harvest sites (3,624 FY22)	157,586 ↘ acres harvested (180,719 FY22)	14 ↘ training sessions (16 FY22)	504 ↗ loggers trained (454 FY22)
14,673 ↘ harvest inspections (15,904 FY22)	4.4 → average inspections per harvest (4.4 FY22)	Riparian Buffer Tax Credit Program	
Water Quality Law Enforcement		63 ↘ tax credit applications*** (73 TY21)	1,222 ↘ acres of buffers retained during timber harvests*** (1,292 TY21)
106 ↗ law enforcement actions (69 FY22)	2 → special orders issued (2 FY22)	\$554,535 ↗ tax benefits*** (\$462,596 TY21)	\$2,654,919 ↗ buffer value retained*** (\$2,356,689 TY21)
0 ↘ emergency special order issued (1 FY22)	11 ↘ Failure to Notify Violations issued (27 FY22)	** Data based on calendar year (CY) Jan. 1 - Dec. 31.	
*** Data based on tax year (TY) Jan. 1 - Dec. 31.			

WATER QUALITY PROTECTION

continued



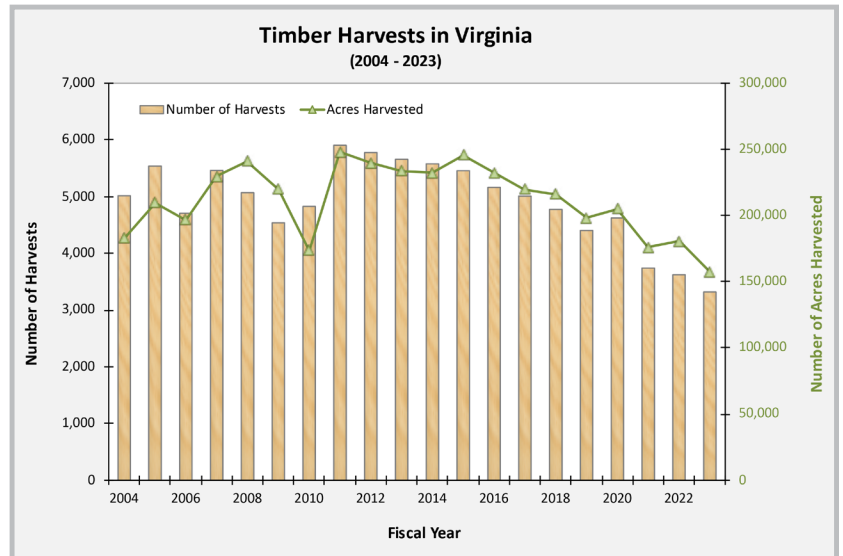
A recent time savings has resulted from using drones to assist with harvesting inspections. A typical inspection can now be conducted in a quarter of the time compared to walking. One of the most valuable BMPs for water quality is the unharvested or partially harvested streamside management zone. This voluntary measure assures an unbroken forest ground cover near the stream, provides shade for water, and preserves wildlife corridors. Through the Riparian Buffer Tax Credit Program, landowners can elect to receive a state tax credit for a portion of the value of the unharvested trees retained in the buffer. By doing so, they agree to leave the buffer undisturbed for 15 years.

Water Quality Enforcement

The Virginia Silvicultural Water Quality Law authorizes DOF's State Forester to assess civil penalties to owners and operators who fail to protect water quality on forestry operations. Virginia is the only state in the southeastern U.S. that grants such enforcement authority to the state's forestry agency. Over the past several years DOF has experienced a downward trend in enforcement actions, which is attributable to a forestry community invested in protecting the waters of the Commonwealth and DOF staff who are proactive with pre-harvest assistance and planning.

Public Education

Logger education is another key focus area of the DOF Water Quality program. Since the development of the first BMP Manual for Virginia, DOF staff have helped provide harvesting contractors with water quality protection training ranging from harvest planning and map reading, to using GPS units to implement forestry BMPs. This training is offered through agency-sponsored events and DOF's participation in the Sustainable Forestry Initiative Sustainable Harvesting and Resource Professional (SHARP) Logger training program. Since 1997, DOF has helped to train more than 11,000 harvest professionals through 385 programs featuring water quality protection education.



Silvicultural BMP Implementation

A statewide audit system has been in place since 1993 to track trends in BMP implementation and effectiveness. DOF is monitoring 240 harvested tracts each year, and 60 tracts per quarter are randomly selected from harvests that received a DOF final inspection two quarters before the audit. This allows approximately three to six months between BMP implementation and the audit field visit. This timing allows for an assessment of how BMP integrity changes over time and provides for a modest sampling of silvicultural practices such as site preparation, tree planting and weed control. The definition of significant risk describes a water quality concern observed on an audit tract that, due to a lack of BMPs, is causing – or is likely to cause – pollution.

When a significant risk was noted during an audit field visit, the auditor also determined if active sedimentation was occurring. The audit results showed that 97.5% of the visited sites had no significant risks, and 98.7% of the sites had no active sedimentation present after operation close-out. The information compiled using this audit forms the basis of reporting for Virginia's Phase III Watershed Implementation Plan (WIP III) in response to the total maximum daily load (commonly called TMDL) for the Chesapeake Bay. DOF assisted with several Virginia Department of Environmental Quality TMDL

WATER QUALITY PROTECTION

continued



meetings to provide harvesting and BMP audit data. This information is also valuable for educational purposes. Each individual question in the audit process is tracked over time to determine which issues in the BMP Manual need improvement and items to be addressed during the SHARP training programs.

Logger BMP Cost-Share Program

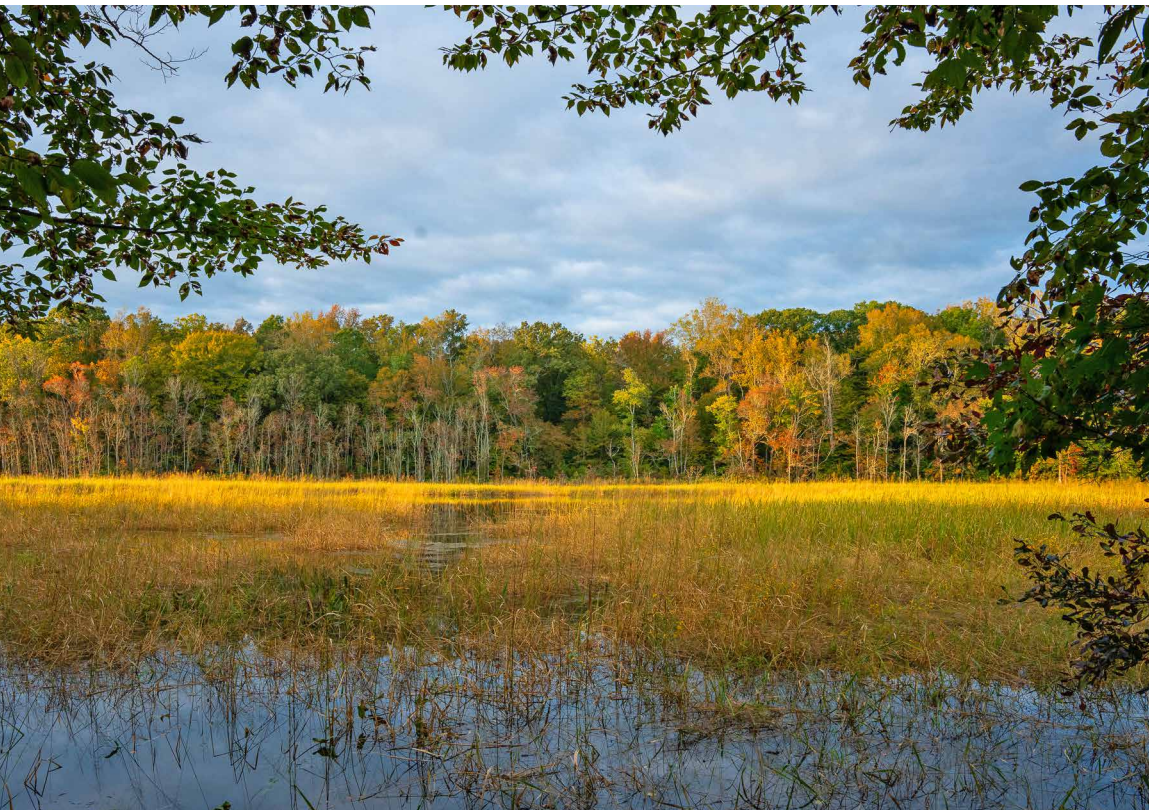
Established in 2006, the Logger BMP Cost-Share Program is funded from the Virginia Water Quality Improvement Fund, provided by the Virginia Department of Conservation and Recreation to DOF. The program is open to forest harvesting operators certified under the SFI SHARP Logger Program administered by Virginia Forestry Association (VFA) and Virginia Tech (or equivalent if not in Virginia), have no current debt for either civil penalty or past due bills owed to DOF, and do not have an active water quality impairment (Water Quality Recommendations, Special Orders or Emergency Special Orders) open on any tracts on which they are currently operating.

Eligible cost-share practices include the purchase of a portable bridge used at stream crossings and forestry BMPs associated with approved stream crossings. This would include culvert purchase, equipment time for installation of BMPs (plus operator), and materials such as grass seed, lime, fertilizer, silt fence and more.

For FY23 and 24, DOF received \$1,000,000 in funding, the most the program has ever received. At the end of FY23, 88 projects were funded for a total of \$736,305.14.

USDA Forest Service Temporary Bridge Program

Towards the end of FY23, DOF received funding from the U.S. Forest Service through the Temporary Water Crossing Program. One of six southern states to apply for and receive funding, DOF will receive the funds through the Bipartisan Infrastructure Law (BIL). The funding (\$350,000) will support temporary water crossings for skidders and heavy forestry equipment through a cost-share bridge program very similar to DOF's current program. Bridge crossings are preferred over culvert and ford crossings as they span the entire stream channel, thus result in less impacts to the stream channel and banks. The increased use of portable bridges and mats will mitigate water resource damage and prevent water quality degradation.



Read the full BMP Implementation Report

FOREST PRODUCTS UTILIZATION & MARKETS



In FY23, DOF continued to see encouraging public interest in wood resource information, as the Utilization and Marketing team responded to more than 100 inquiries on related market trends, urban wood products, service providers, product marketing guidance, biomass, biochar and carbon markets.

Late last summer (following the FY22 reporting timeframe), DOF hosted the Wood Use in Construction Conference in Charlottesville, which focused on the perspective of architecture and engineering. Topics covered during the seminar included sustainably designed projects using mass timber, products and performance associated with mass timber construction, and the future of mass timber across the construction landscape. Presenters discussed details on building codes and lessons learned from local mass timber and cross-laminated timber (CLT) projects in the area. The agenda concluded with a tour of the nearby Apex Clean Energy building, designed and built using CLT. Apex Plaza, the company’s Charlottesville headquarters, offers 187,000 square feet of office space, 875 solar panels, 1.6 million board feet (black spruce) and a “green roof,” which creates habitat to promote biodiversity and stormwater retention.

In FY23, DOF continued to support and encourage biochar outreach to help realize the agency’s goals to attract production facilities to the Commonwealth. DOF supported six biochar manufacturing demonstrations across Virginia where more than 220 participants witnessed

demonstrations of unwanted wood waste being converted into nutrient-rich biochar. Created through a controlled process of burning organic material from agricultural and forestry waste (also called biomass), nutrient-rich biochar can be sold and used to restore degraded soil. Although similar to charcoal in appearance, biochar is produced through pyrolysis, a process that reduces contamination and assists in safe carbon storage.

This year, DOF’s work once again extended beyond state lines. The Utilization and Marketing team traveled across the globe to the Dubai International Wood and Woodworking Machinery Trade Show, the largest wood and woodworking machinery tradeshow in the Middle East and North Africa. More than 400 exhibitors, and 11,000 visitors representing 60 countries, attended this event that provides a perfect platform for suppliers, manufacturers, and machinery and tool companies to showcase the latest trends, innovative technologies, wood products, alternative raw materials, and production scenarios in the industry. In addition to DOF, Virginia was represented by the Virginia Department of Agriculture and Consumer Services and the American Hardwood Export Council, headquartered in Sterling. During the three-day tradeshow, the Virginia booths entertained hundreds of interested visitors, including those from Israel, Lebanon, Turkey, United Arab Emirates, France, Italy, Saudi Arabia, Pakistan, India, China and Vietnam, who expressed interest in white and red oak, ash, and



By the Numbers

FY23 (07/01/2022 – 06/30/2023)

Forest Products Tax**

\$2,552,039 ↗
forest products tax
collected
(\$2,433,386 CY22)

Business Assistance

110 ↘
assistance responses
(150, FY22)

Timber Product Output Survey

64 → mills surveyed (64 FY22)	37% ↘ response rate to survey (57% FY22)
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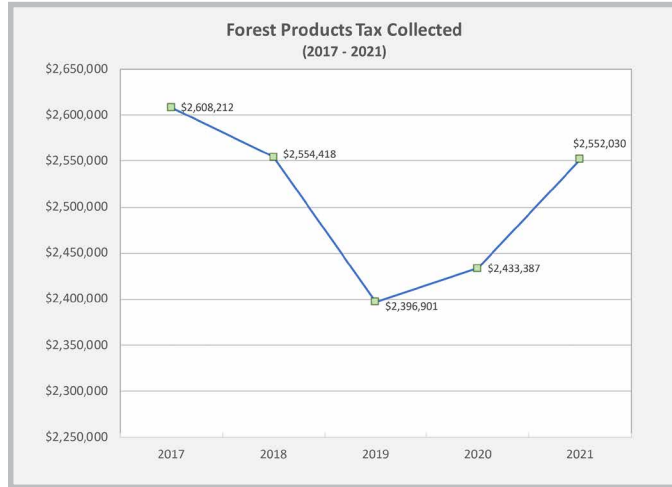
Forest Inventory Analysis Program

776 ↗
inventory plots evaluated
(771 FY22)

** Data based on calendar year (CY) Jan. 1 - Dec. 31.

FOREST PRODUCTS UTILIZATION & MARKETS

continued



yellow and white pine products. A common theme among buyer interest was high-quality construction lumber.

Back in the Commonwealth, DOF launched the Virginia Universities Urban Wood Education project, which introduces students to using local, urban wood in practical applications such as building construction, furniture creation and wood product research. An attractive project feature is valuable hands-on skills training in sawmilling, wood drying, solar kiln construction, wood identification and design-build applications. Designed for architecture, industrial design and natural resources students, current program participants include five universities and one community college across the state: James Madison University (Harrisonburg), the University of Virginia (Charlottesville), Virginia Commonwealth University (Richmond), Virginia Tech (Blacksburg), William and Mary (Williamsburg) and Mountain Gateway Community College (Clifton Forge). Working in close partnership with these institutions of higher education, DOF has expanded the successful program to high school students.

Market Data and Information

DOF gathers, maintains and provides data on the forest industry, inventory and resource availability by publishing technical reports such as the Timber Product Output, Forest Inventory and Analysis (FIA), and Timber Supply Analysis. Since its inception in 1997, DOF's FIA program has provided data for 20 annual summaries of the condition of the Commonwealth's forests. This data, resource information and technical assistance are provided to all forest resource users in the Commonwealth.



STATE LANDS



DOF doesn't just assist private landowners, but also plays an important role with forest management on state-owned lands. Approximately 15,000 to 20,000 acres exist in various forested areas across more than 110 properties across Virginia, such as those owned by other state agencies and academic institutions. DOF develops forest management plans for state-owned lands with the assistance of affected state agencies, departments and institutions to address the management, sale and harvest of timber, and reforestation on these lands ([§10.1-1122 A](#)).

Agencies and institutions whose properties fall under this program include all Virginia community colleges, state-supported four-year colleges. State agencies including in this list include the Virginia Department of Behavioral Health and Developmental Services, Virginia Department of Corrections, Virginia Department of Juvenile Justice, Virginia Department of Transportation,

Virginia Department of Veteran Services, Virginia State Police, Virginia School for the Deaf and Blind, Virginia Department of General Services, Virginia Department of Historic Resources, Virginia Department of Military Affairs Richard Bland College, and the Woodrow Wilson Rehabilitation Center.

DOF creates and updates management plans for each property (at least every 10 years). Plans are always created with consideration of the landowner's management objectives in mind. Funding for the program is derived from the sale of timber and used to carry out management projects that maintain the health of forests, help improve water quality, and ensure Virginia's state-owned lands are sustainably managed for the long term. Per the Code of Virginia, some funding is returned to property owners whose properties were not purchased with General Fund monies.



By the Numbers

FY23 (07/01/2022 – 06/30/2023)

Forest Management

3 ↘ forest management plans completed (16 FY22)	154.3 ↗ acres reforested (88 FY22)
\$190,058 ↗ timber sale revenue (\$188,204 FY22)	\$99,172 ↗ revenue returned to special fund properties (\$13,877 FY22)
\$91,856 ↗ spent on forest management projects (\$48,456 FY22) Note: Costs include contracted services and seedling costs; does not include DOF time and expenses.	

Forest Health

35 ↘ acres treated for invasive species (76 FY22)	\$19,000 ↘ spent on invasive species treatments (\$31,908 FY22) Note: Funding received from Forest Health grants and State-Owned Lands Fund.
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STATE FORESTS



Currently consisting of 26 state forests covering approximately 74,969 acres (the majority of which are certified sustainable to both the Sustainable Forestry Initiative (SFI) and American Tree Farm System standards), DOF's State Forests program follows sustainable, science-based forestry practices that increase the value of the resource while improving health and productive capacity.

In FY23, state forests continued to see more visitors and increased demand for recreational activities in the form of hiking, biking, hunting, fishing and horseback riding. The General Assembly recognized this uptick in the form of \$400,000 of one-time funds which were used to help address state forest infrastructure needs over the last year. Architecture and engineering for two bridges, construction of an expanded parking lot, land management equipment, and other incidentals to improve recreational opportunities were supported with this money. Construction of these engineered structures, including the swinging bridge at the Cumberland State Forest, and an improved replacement bridge at First Mountain State Forest, remains to be completed. Infrastructure needs (both existing and new) continue

to surpass available funds, especially as the public seeks more recreational opportunities.

Education, training and tours at the state forests also continued to rebound in FY23. Cooperative Extension, Master Naturalists, K-12 students, college students and other groups are once again taking advantage of the state forests for outdoor classrooms and forestry management demonstrations.

Virginia's state forests welcomed a new addition in FY23. Two adjacent tracts, Stanley (phase three) and Daniel, added 682 acres to the Charlotte State Forest. The agency continues to pursue the phase four purchase of an additional 222 acres.

The state forests continued to serve as testing grounds for implementation of the agency's Hardwood Initiative, which promotes quality management to advance healthy hardwood forests today and tomorrow. With more than 80% of Virginia's forestland privately owned, DOF works closely with landowners to reverse the decline in our hardwood forests through best practices. Recommendations may include activities



By the Numbers

FY23 (07/01/2022 – 06/30/2023)

State Forests

26 → state forests (26 FY22)

74,969 ↗ acres state forest land (74,286 FY22)

74,882 acres state forests SFI-certified (74,187 FY22)

Forest Management

\$2,101,769 ↗ timber sale revenue (\$1,925,727 FY22)

\$422,605 ↗ paid to counties where revenues were generated (\$332,726 FY22)

669 ↗ acres site prepared for reforestation (325 FY22)

3 ↘ hardwood demonstration projects (7 FY22)

43 ↘ acres hardwood demonstration projects (170 FY22)

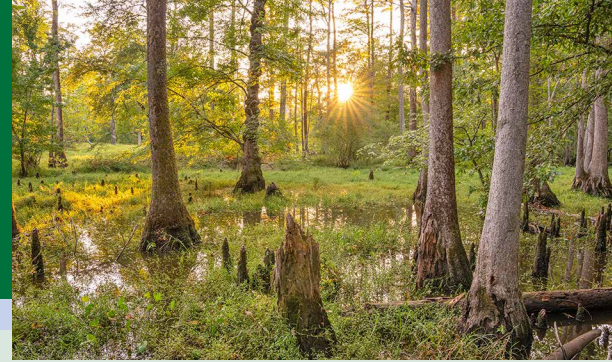
Good Neighbor Authority on Federal Lands

4 ↗ projects (3 FY22)

\$436,095 ↗ timber sale revenue (\$9,719 FY22)

STATE FORESTS

continued



eligible for incentives and DOF foresters help landowners put related plans into action. In addition to improving our forests, activities that facilitate tree regeneration are often beneficial to game and other wildlife. In FY23, DOF completed three release projects on 43 acres that were completed in Chesterfield, Cumberland and Sandy Point state forests.

The listing of the northern long-eared bat as endangered this past March has slowed the implementation of new projects for the Hardwood Initiative and timber sales in the state forests and on state-owned lands. In fact, all forest management in Virginia has been impacted. DOF is working closely with the U.S. Fish and Wildlife Service and the Virginia Department of Wildlife Resources to identify the best means to minimize impacts to the bat while continuing to practice sustainable forestry.



Good Neighbor Authority

Since 2018, DOF has partnered with the USDA Forest Service in the Good Neighbor Authority (GNA) program. GNA allows DOF (and other participating states) to assist the USDA Forest Service in the implementation of forest management on federal lands. The benefits are many: increased capacity for the USDA Forest Service to complete more on-the-ground projects, work opportunities for private industry, and increases the amount of available forest products for harvesting and milling in many Virginia mills. Recognizing that forest health and wildlife management concerns cross ownership boundaries, the Commonwealth of Virginia expanded the use of GNA to other agencies such as the Virginia Department of Wildlife Resources in 2020. Increasing the capacity to accomplish more in Virginia's forests helps the overall management of the state's forested resources.

Currently, there are four geographic areas with agreements in place between DOF and the USDA Forest Service George Washington and Jefferson National Forest. These include Round Mountain West (Bland County) Ewing Mountain (Carroll, Wythe and Grayson) Potts Creek (Allegheny County), Green Hill Flats/Blacks Creek/Moore's Creek State Forest (Rockbridge County).



NURSERIES



DOF’s nurseries continue to provide seedlings – grown with the best genetics for the land here in Virginia – to our customer base made up of landowners, nurseries and the public. In FY23, DOF also worked to increase efficiencies and improve safety at the nursery. A new “top clipper” (equipment used to prune seedlings) was purchased to trim container-grown seedlings using a sickle-bar design, which increases productivity and staff safety compared with the older model.

Record Acorn Collection

Each year, DOF partners with the citizens of Virginia on a statewide acorn and nut collection campaign to ensure the agency can plant the forests of the future. Last fall, DOF put out the yearly call for help and Virginia answered... with enthusiasm. DOF saw incredible donation numbers in FY23, pulling in eight tons of acorns and nuts. That amounts to potentially 1.5 million seedlings being grown at DOF nurseries. This represents the largest year-to-year increase the agency has ever seen...about 400% over the previous year’s collection efforts.

Restoring At-Risk Tree Species

Conservation and restoration of rare or at-risk species is a high priority for DOF. Longleaf pine has declined in the U.S. generally, but in Virginia it’s even worse, reduced to a population of just a few hundred mature trees. In less than a century, shortleaf pine has declined by nearly 10 times. To help reverse these trends, DOF conducts extensive research and continues to work in collaboration with the American Chestnut Foundation, Longleaf Alliance and Shortleaf Initiative on these complex issues.

DOF’s longleaf pine conservation and restoration efforts have preserved grafted duplicates of many remaining native trees that now produce seedlings for restoration efforts in the Commonwealth. In addition, our shortleaf pine efforts have guided our approach to successfully replant this long-ignored species on sites where it can thrive. In response to the increased demand of diminished species, the nurseries doubled the amount of shortleaf pine output, planting 600,000 shortleaf seedlings this year.



By the Numbers

FY23 (07/01/2022 – 06/30/2023)

Sales

27,417,280 ↗
seedlings sold
(26,365,349 FY22)

Inventory

52 ↗
hardwood species grown
(40 FY22)

8 →
conifer species grown
(8 FY22)

Acorn and Nut Collection

3 tons
acorns
(data not available FY22)

5 tons
nuts
(data not available FY22)

8 tons
total acorns/nuts collected
(data not available FY22)

1.5 million
seedlings (based on
anticipated germination)
(data not available FY22)

For more information about services or programs in your area, contact your local DOF office:

www.DOF.Virginia.gov



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