



State and Private Forestry Fact Sheet

Virginia 2022



Investment in State's Cooperative Programs

Program	FY 2021 Final
Community Forestry and Open Space	\$417,000
Cooperative Lands - Forest Health Management	\$1,216,701
Forest Legacy	\$2,570,000
Forest Stewardship	\$246,652
Landscape Scale Restoration	\$1,412,014
State Fire Assistance	\$2,300,060
Urban and Community Forestry	\$921,661
Volunteer Fire Assistance	\$247,150
Total	\$9,331,238

NOTE: This funding is for all entities within the state, not just the State Forester's office.

Program Goals

- The cooperative programs are administered and implemented through a partnership among the Commonwealth of Virginia, the USDA Forest Service, and many other entities. They promote and protect the health and productivity of forestlands and rural economies. Emphasis is on timber and other forest products, wildlife, water resources, rural economies, community forests, and conservation practices.
- The overarching goal is to maintain and improve the health of community and rural forests and their related economies, as well as to protect the forests and citizens of the commonwealth. These programs maximize cost effectiveness through partnerships in program delivery, and increase forestland value and sustainability in a voluntary and non-regulatory manner.

Key Issues

- Virginia's forests are under increasing pressure to provide an array of critical services to citizens and the nation. The most obvious benefits are productive jobs, strong communities, and excellent environmental health—including clean water and air, bioenergy, habitat, and buffers against climate change. Virginia Department of Forestry (VDOF) strives to equip forest landowners with the information and knowledge to sustainably manage their forests for current and future generations.
- Protecting and maintaining healthy streams and enhancing water quality and quantity are drivers in strategic planning for the VDOF. VDOF supports a unique position among southern states through a statewide logging inspection audit program and is supporting a southeastern regional effort to provide consistent monitoring of best management practices (BMP) on silvicultural sites. VDOF conducted 16,667 harvest inspections on 3,742 timber harvests to ensure water quality protection and compliance.
- With the potential listing of aquatic threatened and endangered species by the U. S. Fish and Wildlife Service, it is imperative that the forest community be aware of the impact that these potential listings can have on future forest management. The VDOF has been monitoring these listings and has provided comments in support of Forestry Best Management Practices to protect the aquatic resources. There are many proposed future listings that need to be monitored closely.
- Rapid urbanization in recent years has greatly increased fire danger in the more than 5,315 at-risk wildland-urban interface areas throughout Virginia. Concentrated efforts on improvements in Virginia's highest risk communities, as well as a continued focus on maintaining a high level of agency readiness, is important to limit the potential for wildfire-related damages.
- Swift and efficient initial attack of wildfire is key to the protection of Virginia's assets. Agency response efforts protect an average of 1,300 homes and other structures annually, with an estimated

value of more than \$97 million.

- VDOF continues to take steps to develop a long-term pursuit of improved hardwood forest management across the Commonwealth. The hardwood forest habitat initiative will help landowners manage their forests to increase natural regeneration of desirable young hardwood trees, help protect water quality, enhance wildlife habitat, support recovery of threatened and endangered species, and bolster Virginia's outdoor recreation opportunities.
- Despite the economic improvement, VDOF still needs to be aware of challenges and issues that affect our forests and forest industries. Timber harvesting continues at high levels, and these increased harvests are very positive to Virginia's private forestland owners and the economy. VDOF needs to continue to actively monitor our resource availability and sustainability to ensure that the citizens of Virginia continue to receive all the benefits they depend on from our forests.
- Traditional forest industry jobs continue to transition to new markets with globalization. The carbon sequestration market-driven bioenergy sector, for example, continues to be strong. As the economy and the housing sector improve, some forest markets are growing; however, other under-performing markets are negatively impacting forest landowners and industry. Increasing efforts in exports and value-added manufacturing, such as cross-laminated timber and other emerging markets, will be needed.
- Continuing fragmentation of non-industrial private forestlands (NIPF) presents new challenges as the number of landowners needing services increases.
- VDOF was mandated by the five-state Chesapeake Bay Agreement to achieve the adoption of urban tree canopy (UTC) goals by at least five municipalities by 2010. VDOF has engaged 42 communities in assessing their UTC goals and supports the UTC effort with both technical and limited financial assistance. VDOF must maintain interest in UTC in the face of limited budgets at all levels of government.
- Ecosystem services and benefits provided by forests are undervalued. Even with the financial contribution provided by the forest products industry (\$21 billion annually), losses to the forestland base are unacceptable. It is imperative that we better develop markets for ecosystem services, such as water quality, carbon sequestration, and biodiversity. It is also imperative that we better account for the conservation of these important services.
- Virginia's forests are threatened by a number of forest pests. Wavy-leaf grass has joined tree-of-heaven, kudzu, and a long list of other non-native invasive plants that are crowding out or impeding establishment of native tree species. Additionally, invasive insects and tree diseases are negatively impacting hundreds of thousands of trees. The hemlock wooly adelgid is killing hemlock trees, the emerald ash borer is devastating the ash resource, and gypsy moth can also cause severe damage.

Forest Facts and Accomplishments

Selected Facts	Value	FY 2021 Accomplishments	Value
Population	8,001,024	Landowners Receiving Educational or Technical Assistance	9,594
Acres of Forest Land	16,067,621	Acres Covered by New or Revised Forest Stewardship Plans	47,516
Acres of Nonindustrial Private Forest Land	12,256,000	Acres in Important Forest Resource Areas Covered by New or Revised Stewardship Plans	11,753
Number of NIPF Landowners	410,000	Volunteer Fire Departments Assisted	300
Acres of Federal Land Under State Fire Protection	2,217,900	State Fire Communities Assisted	1,270
Acres of Private Land Under State Fire Protection	13,195,300	Coop Forest Health Acres Protected	67,892
Number of Rural Fire Departments	597	Forest Legacy Project Acquisitions	4,189
Cities and Towns	229	Communities Provided Urban Forestry Program Assistance	127
Forest Based Employment	107,900	Population Living in Communities Provided Urban Forestry Program Assistance	6,612,665
Economic Impact of Forestry (by rank)	3	Urban Forestry Volunteer Assistance	17,167
State Forestry Budget (All Sources)	37,115,564		

Program Highlights

Community Forestry and Open Space

Staff participated in and VDOF partially funded a study of urban heat islands across the state. This project was led by the Virginia Foundation of Independent Colleges and the Science Museum of Virginia. The "Heat Watch" Campaign, conducted on July 15, 2021 in eleven Virginia cities, was the largest study of its kind in the country and hosted hundreds of volunteers. Ten of the eleven communities are Tree City USA communities. Once processed, the data collected will be used to prioritize tree planting projects in each of the 11 communities.

Conservation Education

VDOF provides conservation education programs statewide. Outreach ranges from pre-school children to adults via Master Naturalist chapters, landowner education, and Project Learning Tree (PLT) facilitator training. VDOF hosts Camp Woods and Wildlife each summer for students ages 13 -16. Local VDOF work areas actively participate in school programs, career days, youth and civic group presentations, and local festivals and events to provide forestry education to Virginians of all ages. VDOF Public Information staff collaborate with the Southern Group of State Foresters committees, the NASF and North American Forest Partnership, and other agencies and institutions to establish robust outreach programs and messaging, as well as to maximize educational resources. The Public Information Office maintains social media platforms (Facebook, Twitter, and Instagram) and an e-publication, Field Notes, to highlight forestry and conservation topics. Faced with the challenges of providing outstanding educational resources within socially distanced guidelines, VDOF converted a significant portion of its PLT efforts to online modules, created virtual tours and activities to support at-home learning, and worked with field staff to create virtual "career-focused" resources.

Cooperative Fire Protection

State Fire Assistance provides funding to support firefighting resources throughout Virginia. The main focus areas of Cooperative Fire Protection in the Commonwealth include training of 220 firefighters in wildfire suppression and incident command; development of additional volunteer fire department capacity through federal property programs and Volunteer Fire Assistance grant funding; focused efforts on wildfire hazard mitigation in Virginia's highest risk woodland home communities; and wildfire prevention efforts that use both targeted public messaging and law enforcement efforts to reduce unwanted fire starts. Specific program areas include use of the Federal Excess Personal Property Program to assist Virginia in acquiring and placing fire equipment in rural communities throughout the state; the use of Volunteer Fire Assistance funding to provide much needed personal protective equipment, tools, and equipment to rural fire departments across the state; and focused efforts through the State Fire Assistance program to reduce the threat of wildfire damages in Virginia's highest-risk communities.

Economic Action

VDOF is actively involved with partners and other stakeholders to look for new markets to improve utilization of our forest resources. VDOF continues to improve and evolve its economic development programs in the Southern region. Examples include working with Virginia Tech and other partners on emerging markets for low-grade and underutilized wood, including biomass energy; urban wood utilization; cross-laminated timber (CLT) production; and specialty forest products. To help with forest management on small forest acreages and urban/suburban forests, VDOF and partners provide business development workshops to address the lack of service providers that work in these areas. A database of forestry service providers focused in these areas continues to expand, adding new businesses monthly. To diversify forest-based economic development in the state, workshops and research are being conducted on specialty forest products such as biochar, and developing potential uses for Ailanthus and other invasive species to assist with control efforts. A recently updated economic study highlights the importance of forestry and the forest industry in Virginia. VDOF is promoting forest industry and products domestically and internationally through membership in or partnerships with agencies and groups such as the Virginia Economic Development Partnership, Virginia Department of Agriculture and Consumer Services, the Virginia Biomass Energy Group, the Virginia Forestry and Forest Products, and Loggers Associations, the Southern Group of State Foresters Services, Utilization & Marketing Committee, and state universities.

Forest Health Protection

VDOF monitors Virginia's forests for forest health disturbances. Historically, the southern pine beetle has been the most devastating native pest to the pine resource in southeastern U.S. Even though southern pine beetle populations are currently low, VDOF's pine bark beetle prevention program (in cooperation with the USFS Forest Health Protection Program) remains a top priority. Since the program's inception in 2004, nearly 69,000 acres have been thinned to reduce the risk of bark beetle infestation in the state's pine belt. In hardwood forests, Virginia continues to experience oak decline - the gradual failure in the health of oak trees that results from the interaction of a variety of biotic and abiotic factors, such as old age, site conditions, drought, and defoliation. Gypsy moth is a common defoliating pest in western Virginia, but populations have been relatively low the past four years, most likely due to the prevalence of a fungus that infects and kills gypsy moth larvae. The emerald ash borer is a major threat to the ash resource and has been confirmed in 83 counties. The Commonwealth's hemlock trees continue to decline due to the hemlock woolly adelgid. VDOF Forest Health program staff treat ash and hemlock trees on State Lands to protect these endangered tree species (85 ash and 173 hemlocks were treated in 2021). VDOF also participates in the release of biological control agents for emerald ash borer and the hemlock woolly adelgid, to provide long-term protection to host trees. Emerging pests that were recently detected in Virginia include the spotted lanternfly, laurel wilt disease, and beech leaf disease. In addition, wavyleaf grass has joined the long list of non-native invasive plant species that are negatively impacting forest health. VDOF monitors all emerging forest pests in an effort to stop/slow their spread and minimize their impact.

Forest Legacy

The Forest Legacy Program (FLP) in Virginia completed its 20th year in 2021. VDOF engaged conservation partner groups statewide to develop two new project proposals and complete the acquisition of four tracts: two fee simple expansions of existing state forests and two new conservation easements supported by approximately 3 million FLP dollars. The Nature Conservancy and The Conservation Fund played key roles on the state forest expansions, helping with costs and due diligence work. With the addition of 2,474 acres, a parking area, and signage, the Charlotte State Forest (CSF) was nearly doubled in size and was opened for public recreational use. VDOF is preparing a new forest management plan for the CSF, has added the land to its portfolio of Sustainable Forestry Initiative certified tracts, and will carry on the long legacy of sustainable timber management practiced by the prior owners. VDOF completed a large conservation easement in Highland County, permanently conserving several unique forested and rocky habitat types on upper mountain slopes as high as 4,000 feet elevation. Rare forest stands include native red spruce and paper birch, near the southernmost extent of the species' ranges. This new FLP tract is noteworthy for its forest species diversity and high climate resiliency. A new FLP easement completed in Sussex County helps both VDOF and The Nature Conservancy advance Longleaf Alliance goals for Virginia's primary longleaf pine restoration area and red-cockaded woodpecker habitat expansion.

Forest Stewardship

The Forest Stewardship program continues to equip and support the VDOF field foresters to help private landowners plan and improve management of their lands. This planning process enables foresters to help the landowners see beyond their immediate objectives to a more holistic, multi-resource based management to meet their long-range goals. VDOF has concentrated our efforts and funding to the "federal investment areas," but will still develop Forest Stewardship Plans across the state, upon request. The benefits derived from the Forest Stewardship program extend far beyond those enjoyed by the landowners. Every citizen enjoys clean air, clean water, wildlife habitat, soil and water conservation, aesthetics, and recreational opportunities afforded to them by healthy, sustainable forests. VDOF continues to nurture a strong partnership with Virginia Tech, through Stewardship funding, to provide outreach information and training events to forest landowners. Significant events have included forest landowner retreats, outreach to real estate professionals, bus tours, electronic newsletters, various virtual and in-person workshops, and a management video series called "Fifteen Minutes in the Forest".

Landowner Assistance

VDOF continues to provide information, recommendations, and technical assistance to landowners in managing their forest resources. VDOF field foresters and technicians develop plans for forestry practices and provide guidance to implement them often in concert with forestry service contractors and consulting foresters. VDOF operates two seedling nurseries, with a capacity of more than 30 million seedlings, used to support very active reforestation and conservation programs. VDOF is working closely with the USDA, state, and private partners to reinvigorate the riparian forest buffer establishment program in the state.

Currently, VDOF foresters can guide landowners to one of the two private programs or three state and federal programs that best meets their needs. Virginia's forested buffers play a key role in protecting water quality, improving wildlife habitat and agricultural conservation, and ultimately improving and protecting the nation's largest estuary, the Chesapeake Bay. Virginia's Hardwood Forest Habitat Initiative is a multi-faceted approach to improving the quality of Virginia's hardwood forests through intentional, professional management. Ten forest management practices have been identified as most needed to improve hardwood forests. VDOF established the Hardwood Habitat Incentive Program, a cost-share program for private forest landowners, to assist with the costs of carrying out prescriptions by VDOF foresters. In 2021, staff developed a Hardwood Assessment Tool to aid foresters in making prescriptions by working systematically through a decision-making process. As an outreach, education, training, and contractor development tool, operational scale demonstration projects are underway to showcase the forest management practices. Crop tree release is of particular focus this year, but understory treatments, invasive species control, and expanding gap harvests are being implemented as well.

Landscape Scale Restoration

VDOF participated in the Upland Oak, I and II, LSR grants, which are closely allied with Hardwood Initiative in which VDOF focuses efforts on training and establishing demonstration areas. A 2021 LSR Grant, "Putting Plans into Action, Hardwood Management in Virginia" will enable VDOF to move Hardwood Initiative forward by establishing operational-scale hardwood demonstration areas in many parts of the state. Another 2021 LSR Grant, focuses on rebuilding prescribed burning capacity to address multiple production, protection, and forest restoration needs. LSR grant funds are being used to design a Virginia Forest Literacy Plan, based on the Texas model and customized to Virginia with the help of stakeholders. The plan will outline critical knowledge and messages about forestry for all ages. It provides a blueprint for training agency staff to effectively share these messages, and it integrates other ways the agency and partners share forestry messages with Virginia citizens. A 2017 LSR grant was used to implement a VDOF ash treatment cost-share program, which is being continued with the 2019 LSR grant "Grand SLAM: Slowing Ash Mortality in the South". In addition to protecting high value specimen ash trees, this grant also supports outreach with minor league baseball teams to educate the public about the threat of emerald ash borer and the importance of not moving firewood. Another invasive species is being targeted by the 2021 LSR grant "Restoration of Ailanthus Stands Following Their Removal with a Bio-Herbicide." A native pathogenic fungus will be used to remove invasive Ailanthus trees at demonstration sites, and restoration techniques will encourage native plant growth.

Urban and Community Forestry

VDOF, through a partnership with the USDA Forest Service, provides communities with technical, financial, and educational support so they may plant, protect, and maintain community trees and forests. In FY21, VDOF's program assisted 135 communities including 63 with the Tree City USA designation. VDOF provided planning assistance for several underserved communities through the Virginia Tech Community Design Assistance Center. VDOF and Trees Virginia provided both virtual and in-person educational opportunities focused on tree care, arboriculture and volunteer engagement. Trees Virginia also provided \$7,500 in scholarships for 2-year, undergraduate, and graduate level students in natural resource fields. VDOF sponsors the Virginia Natural Resources Leadership Institute, which takes participants through a process of investigating various environmental issues and leadership training. VDOF continues its leadership with the Urban Forest Strike Team (UFST) by training state personnel in protocols to evaluate tree damage following natural disasters. The UFSTs have responded in Florida and Alabama during the past year after Hurricane Sally, and recently expanded their focus to include invasive species response after assisting the Virginia Department of Agriculture and Consumer Services with spotted lanternfly. VDOF continues to assist the International Society of Arboriculture (ISA) to promote the Certified Arborist Program by hosting trainings each year and providing scholarship funding through the local Mid-Atlantic-ISA chapter. VDOF has engaged 42 communities in the process of establishing urban tree canopy goals to help meet Virginia's Chesapeake Bay Agreement commitments. Also, VDOF continues to support the evaluation of utility-friendly tree cultivars under its Municipal Tree Restoration Program. Through the Virginia Trees for Clean Water program, 68 communities and/or non-profits across the state have received over \$355,000 in grant funds for tree planting.

Water Quality

VDOF has been involved with protecting our forested watersheds since the early 1970's, with the development of our first set of Forestry Best Management Practices (BMPs) for water quality. VDOF now uses the fifth edition of those guidelines, which came out in 2011. The backbone for VDOF's water quality

effort is the harvest inspection program, which began in the mid-1980's. This program has provided for one-on-one contact between VDOF and the harvest operators and is a welcomed opportunity to instruct the operators about BMPs and the latest water quality protection techniques. In FY21, VDOF field personnel conducted 16,667 field inspections on 3,742 timber harvest sites (4.5 inspections per site) across Virginia, encompassing 176,213 acres. Another main focus of the VDOF water quality program is logger education. This occurred through training that the agency sponsored and through VDOF participation in the SFI program, enabling VDOF to assist in training 10,689 harvesting professionals in 355 programs related to water quality protection since 1997. In FY21, eight training programs were offered, reaching a total of 372 individuals. Results from the calendar year 2020 data show that BMP harvest median implementation rate on 240 randomly selected tracts is 95 percent. (The harvest median score is the best judge of central tendency of the tract score.) The audit results also showed that 99.58 percent of the sites visited had no active sedimentation present after the close-out of the operation. Calendar year 2021 BMP Implementation data is currently being analyzed and will be available in February 2022.

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