

Strategic Plan
(2012-2014 Version 1)

Department of Forestry (411)
Agency Plan

Mission Statement

The mission of the Department of Forestry (DOF) is to protect and develop healthy, sustainable forest resources for Virginians.

Vision Statement

We envision a healthy, abundant forest resource providing economic and environmental benefits to the Commonwealth on a sustained basis. We see a resource whose scenic beauty enhances natural surroundings and whose forested resource supports clean air, clean water and a diverse population of wildlife. We further see a diverse forest resource as a part of natural ecosystems. We envision the economic benefits of the forest industry to be in balance with the environmental values of the resource and the public. We envision the Department as the most effective forestry agency in the nation and as a leader in managing, conserving and protecting the resource. We see an agency built on solid technology backed by strong ethics; one that is able to stay ahead of change and is quick to respond to citizens' needs, and one that is a leader in providing forest resource information. We see the Department responding to its employees' needs through leadership characterized by open communication to enable employees to form creative solutions to problems and who have the time and tools to provide exceptional forestry services to landowners, citizens and organizations. We see employees who are knowledgeable, motivated, pro-active and enabled to make decisions. Finally, we envision a workforce whose professional, unbiased, scientifically based recommendations impact positively upon an informed public and whose efforts result in complete overall customer satisfaction.

Information Technology

Current Operational IT Investments

Communications:

The Department of Forestry (DOF) provides constituent services by protecting Virginia's forests and residents from wildfire and in conserving the forestland base. The agency's strategic plan further outlines that all emergency vehicles and personnel will be ready for immediate response with radio equipment, which shall be available on all incidents. DOF accomplishes this through using dispatch consoles at headquarters and regional offices while the users are equipped with vehicle-mounted and portable land mobile radios.

Regional offices are equipped with one (1) Statewide Agencies Radio System (STARS) dispatch console. These full functional consoles are single use application personal computer (PC) based devices connected to a private network. The network is comprised of infrastructure hardware connected by a point to point T1 to the closest Virginia State Police facility. A public safety standard Computer Aided Dispatch (CAD) system along with the standard interoperability solution connecting DOF dispatchers to local 9-1-1 centers will complete the dispatch facilities.

Each responder vehicle is equipped with a minimum of two (2) mobile radios and firefighters are issued two (2) handheld units. The first mobile radio is a Statewide Agencies Radio System (STARS) unit providing the vehicle operator direct communications with their associated DOF regional office and other firefighters within their region. Simultaneously, the second mobile provides seamless communications with local 9-1-1 dispatcher centers, locality first responders and law enforcement. As a result of the Federal Communications Commission (FCC) narrow banding initiative with an implementation due date of January 1, 2013, DOF has purchased additional radio units to "talk" to new local radio systems throughout the Commonwealth. Many localities could not provide DOF with replacement radios when the upgrades were made. This interoperability provides DOF firefighters with critical communications between themselves and local firefighters.

DOF firefighters are equipped with one (1) STARS handheld radio providing direct communications to their regional office, DOF headquarters, and other Commonwealth of Virginia agencies. Radios are also being used by firefighters to receive directives from incident command and to communicate with one another on scene. The second unit, or tactical radio is programmed with conventional analog frequencies authorized by the FCC for use by forest fire operations only, and is kept by a DOF employee to temporarily issue the device to a part-time firefighter arriving on scene to assist in fire suppression efforts.

Information Systems:

The objective of the Information Systems Division of DOF is to support DOF divisions and employees in meeting their goals and objectives with innovative and cost effective information systems and services. The Information Security Division will do this in the upcoming biennium by:

- Meeting Commonwealth of Virginia (COV) and DOF Security Policy requirements;
- Maturing the agency Information Systems internal control processes;
- Exploiting current data and improving data quality;
- Enhancing reporting and analysis including geographic information system (GIS);

The Information Systems Division is staffed by four employees – a Director, a System Administrator, a GIS Manager and a GIS/Remote Sensing Analyst. With this level of staffing, DOF is able to meet the GIS data and analysis needs of the agency and provide basic helpdesk and troubleshooting, but lacks enough knowledgeable and skilled IT staff to cover administration and technical fixes of the agency's three enterprise systems.

An additional resource is the DOF Agency Information Technology Resource (AITR) who is charged with coordinating with the Virginia Information Technology Agency Northrop Grumman (VITA/NG) Partnership, but does not provide hands-on support to DOF information systems, and is also the manager of the Communications section at DOF, and responsible for DOF radios and telephones.

In the July 2011 Information Security Audit of the Department of Forestry's (DOF's) Information Security Program, there were several findings that pointed to weaknesses of Internal Control and Reducing Vulnerabilities. Some of the findings can be corrected through process improvements, while others can only be corrected by the addition of qualified staff and upgrade and/or replacement of DOF information systems.

Until a few years ago, there was three to four more staff within the agency that supported the information systems. When staff left the agency, those positions were not re-filled as part of an effort to manage a very tight budget brought on by the weak economy. The current low staffing level has left sensitive information systems vulnerable and non-compliant with COV Information Security Standards.

In the early to mid part of the last decade, DOF was able to leverage several grants into the flagship Integrated Forest Resources Information System (IFRIS®), a

comprehensive, award winning enterprise information system. IFRIS® was developed in accordance with the enterprise architecture (EA) model adopted by the Commonwealth, but currently does not meet COV Information Security standards. The three DOF enterprise information systems - IFRIS®, the financial Information Management System (IMS) and the New Information Management System (NIMS) for seedling sales and inventory management do not meet the COV Information Security Standard for the use of end-of-life software, separation of duties, and other software security vulnerabilities. DOF will replace the NIMS system with a software as a service, utilizing self-funded seedling nursery revenue. The agency is currently replacing the IMS system and will seek general funds to upgrade/replace IFRIS® modules that are not COV compliant.

Without adequate internal technical resources when complex technical needs arise with DOF information systems, the agency must rely on consultant experts to fix the agency's information systems. These include upgrades or fixes related to security issues.

In addition to internal software security issues, the increase in infrastructure cost through the Partnership has affected the agency's ability to adequately plan for needed fixes and enhancements that keep systems in line with COV Information Security Standards. More money now goes to the basic infrastructure (servers, network, and backup) leaving a very small amount for any kind of system fixes, and even less for enhancements. These infrastructure costs have also required that DOF's partner Virginia Geographic Information Network (VGIN) at VITA significantly reduce the availability of enterprise aerial photography to DOF. IFRIS® utilizes the aerial photography in its original mapper to geographically reference managed timber tracts and stands, as well as riparian buffers, forest health observations and logging operations on which DOF must inspect and audit water quality best management practices. If DOF wants to continue to use these data in the original mapper, the cost is over \$5,000 a month for static data storage by the Partnership, a cost that neither VGIN nor DOF can afford.

DOF has pursued grants and partnerships to help close the growing gap between where we are and where we need to be, but most grants are for "new" efforts, and many cooperators are unwilling to partner with us due to pressing priorities of their own.

Despite these impediments, DOF has had several successes.

In early 2011, the agency moved the Asset Inventory and Fleet Management modules from the IMS to IFRIS®. These two modules allow users to track the assets assigned to them such as chainsaws, firefighting equipment and vehicles. The Fleet management system tracks fleet maintenance records for both passenger vehicles and other equipment like all terrain vehicles (ATV) and bulldozers used by DOF.

Also in early 2011, DOF implemented a Water Quality Best Management Practices (BMP) Audit module in IFRIS®. This module was dropped from the original scope of work of the Water Quality and Fire Protection project due to budget and time constraints. This module allows DOF water quality field staff to utilize both a web interface and mobile data collection.

In 2010 and 2011, DOF partnered with Virginia Tech to develop a public-facing, interactive land management tool called InFOREST that provides landowners, natural resource managers and land-use planner's access to information about the resources they manage. The system allows users to ask "what if" questions about carbon sequestration in a forest stand, the value of different land use types for decreasing nutrient and/or sediment runoff, and nutrient offset calculations for the Virginia Nutrient Training Program.

DOF continues to utilize GIS and remote sensing technology as a critical data management, analysis and reporting tool in web, mobile and desktop environments. Here are some of the GIS and remote sensing projects that DOF has completed in the past two years:

- Preparation and delivery of DOF site plans in 2010 and 2011 to the Department of General Services through the use of GIS data and cartographic production tools
- Support for DOF Spray Program creating over 600 maps in 2010 and 300 maps in 2011 for aerial and ground-based spray contracts
- Annual reporting for National Forest Service, Performance Measures Accountability System (PMAS)
- Several ad-hoc analysis, reports, and cartographic products for grant applications and FOIA requests

Factors Impacting the Current Agency IT

Communications:

External influences are driving several changes to our business environment, such as mandated narrow banding by the Federal Communications Commission (FCC), Homeland Security's National Emergency Communications Plan, and the Statewide Agencies Radio System (STARS). These changes have positively contributed in moving the DOF as well as the entire Commonwealth into a new era where advanced technologies provide better coverage, greater interoperability and additional frequency spectrum from which all private land mobile users are benefiting.

As addressed in the Current IT State and Issues section, the FCC ruled that all private land mobile radio users such as the DOF must move from the former 25 kHz (wideband) standard to the new standard 12.5 kHz (narrowband) voice channels by the end of 2012. Also with the increasing and much needed emphasis on interoperability, the agency desires to incorporate a Computer Aided Dispatch along with a Voice over IP (VoIP) interoperability solution, emulating a Public Safety Access Point (PSAP).

Information Systems:

DOF's demand for Information services exceeds capacity in several areas – staffing, budget, infrastructure and IT expectations.

1) Limited Human Resources. In order to deliver needed information system services and maintain existing systems in accordance with best practices and COV Information Security Standards, it is crucial to have enough skilled and knowledgeable staff to successfully perform maintenance activities, guarantee separation of duties and provide strong change control for administration of sensitive systems. DOF currently has only one staff with the education, training and knowledge to administer the DOF sensitive system databases, and no staff with programming or change control skills.

2) Limited Financial Resources. Commonwealth budget outlook and the increase of cost for Partnership Infrastructure Services impact DOF's ability to maintain current IT systems, upgrade systems with inadequate security, or fund new IT services and investments. Information systems have a lifecycle like any other technology, and software and hardware need to be replaced as technology changes to ensure the stability and security, and to maintain compliance with Information Security standards. DOF does not have the funds needed to make critical changes to information systems to ensure their secure operations.

>DOF's flagship application IFRIS®, released in 2006, utilizes ArcIMS mapping software as a key component of the system. ArcIMS is no longer being updated by the software company, ESRI, and will be out of support within 3 – 5 years. As infrastructure costs have gone up over the past years, more of DOF's IT budget must be spent to cover these costs.

>DOF's financial system IMS utilizes dBASEIII which is no longer sold or supported. The core functions this application provides need to be re-written into a more modern, supportable and securable software. DOF has received general fund dollars to re-write these functions in more modern, supported software.

3) Inadequate Infrastructure. DOF has both internally managed infrastructure (mobile Global Positioning Satellite-enabled (GPS) data collection devices) and Partnership managed infrastructure. Budget constraints have impacted the agency's ability to maintain the DOF infrastructure.

>DOF mobile devices were purchased at the midpoint of the original IFRIS® project, in 2005 and are beginning to fail. In addition to the hardware failure, the operating system that these devices use (Microsoft Windows Mobile) has been replaced by Microsoft, and will be end-of-life within the next 3 – 5 years, requiring an upgrade of the

operating system and the IFRIS® Mobile software to run on a more modern operating system to ensure secure and stable operation.

>The June 2011 audit of the Information Security Program highlighted the need for separate testing environment for DOF systems to ensure safe and controlled changes to the sensitive systems. Due to the infrastructure cost of replicating the current production environment in a test environment, DOF had opted in the past to put the "test" environment on the same servers as the "production", or live environment. This situation leaves the production environment vulnerable to failure if there is a serious problem with testing.

4) IT Expectations. The expectations raised by VITA of well-planned technology investments, shared services, enterprise solutions and information security serve DOF and its customers well. However, funding for COV mandated technology practices has not kept up with the expectations.

>Advancements in information security standards and practices, and the relative old age of some enterprise DOF information systems have left the agency's information at risk in areas of confidentiality, availability and integrity, but lack of funding for on-going system operations and maintenance has left the agency without the means to correct the problems. The expectation that a small or mid-sized agency can fund and fulfill the same standards of practice as a large agency is misleading, as in a smaller agency it is not likely that there is staff with the knowledge or skill to perform these duties.

>IFRIS® was developed in partnership with the Virginia Geographic Information Network (VGIN) and uses the VGIN aerial photography in both the original and new mapper. As stated before, the original mapper uses ArcIMS, which requires the data be in a database format, rather than a web service. DOF is now the only agency that utilizes the VGIN database imagery because the funds have not been available to upgrade the original mapper to a newer technology that uses web services (also provided by VGIN). The Partnership infrastructure storage costs for these static data (no back up needed) is over \$60,000 per year and DOF may need to begin paying for a service upon which IFRIS® was built with the help of VITA and VGIN.

Proposed IT Solutions

Communications:

DOF desires to change the state of their current communications capabilities. Staff in the field needs the ability to contact Incident Command and headquarters (HQ) support during field operations. Interoperability solutions, on scene communications, and wide area network monitoring in Incident Command Posts is necessary. Dispatchers need an automated method of entering data through a web based application that will be searchable while canned and ad-hoc reports are also available.

Information Systems:

DOF Information Systems will approach the next biennium with focus on key, interrelated areas to:

- 1) Upgrade or convert critical business information systems that are not COV Information Security compliant to ensure availability and security of these systems;
- 2) Create a more mobile workforce through deployment of smart phone technology and laptops;
- 3) Consolidate DOF infrastructure to save resources and simplify management;
- 4) Seek opportunities for collaboration with other state, federal, educational and private entities to take advantage of technology synergies to save time and resources.

Anticipated IT Changes:

- > Develop detailed medium/long-term strategies to meet internal and external DOF Information Security and business needs
- > DOF field staff will begin testing laptops and smart phones to support increased mobility of DOF staff, and their need to access and share information.
- > Upgrade/re-write of DOF Fiscal IT system to bring into compliance with COV Information Security Standards
- > Update DOF Information Security Program to meet changing COV Standards and Guidelines.
- > Develop and/or update DOF information system documentation to support operations and DOF Information Security Program.
- > Patch recently upgraded federal Incident Qualification System (IQS).
- > Upgrade of DOF workstations to Windows 7 as they are refreshed, requiring testing and possible changes to information systems.
- > Disaster Recovery testing of one DOF sensitive system.
- > Monthly server patch testing.

Financial Overview

Forestry receives funding from general fund appropriations, special revenue funds, trust funds and federal grants. Special revenue funds consist of revenue generated through seedling sales, timber sales, fire suppression services, professional forestry services, and forest products taxes.

DOF shall provide services to every county of the Commonwealth. The agency must receive sufficient funding for fixed and variable operating expenses as well as competitive salaries and incentives to maintain qualified staff. Equipment rotation and personal protective equipment are also necessary to assure the employees' safety and effectiveness on wildfires and emergency events. Due to budget reductions, however, the agency has had to increase the replacement time of firefighting equipment from 20 years to 25 years. DOF must improve technology to deliver the information requirements of the forest landowners, forest products industry, planners and other organizations.

Over the years, our general fund support and special funds have not kept up with inflation yet we have realized a sharp increase in federal funding. However, more than 60% of our federal funding is for special projects. Many of these special projects are passed through to localities, non-profits and individuals as transfer payments while our federal funding that can be used for operational expenditures has been declining. Forestry expenses consist primarily of personnel (75%) and recurring operating costs (20%) leaving only 5% of our budget for discretionary spending.

The DOF has been challenged to make a 32% reduction in general fund support over the past four years while serving an increased number of customers due to parcelization of forestland. In fact, Virginia expects to see more development in the next 40 years than during the last 400 years. Additionally, the state's rapidly growing population is pushing development of homes into formerly forested areas, resulting in increased fire risks and greater challenges for protecting citizens and homes. As more Virginians move into woodland home communities, fighting wildfire becomes more complex. Our reduced workforce is highly trained in all aspects of forestry including managing the rapid spread of invasive weeds and newly introduced pests that threaten the health of Virginia's trees as well as the ever important role forests have in keeping our drinking water clean.

Funding our equipment is our biggest challenge due to the capital investment required for the size of our fleet. In order to perform DOF's mission dependably and consistently, DOF requires a dependable and consistent level of funding to maintain an adequate fire-ready fleet of emergency vehicles. DOF tries to follow a rotation schedule to replace emergency vehicles and equipment that wears out, becomes obsolete or needs to be replaced per recommendation for the useful life of the vehicle/equipment. Meeting the replacement schedule for firefighting equipment is the best way to minimize costs and better protect employees and the public. Meeting the replacement schedule reduces the frequency and degree of maintenance on older equipment, allows our mechanics to better plan for known workloads annually (avoids contractor expenses), and eliminates questionable equipment from use in emergency situations.

Another critical need is fiscal and other information system upgrades as well as our need to become more mobile by changing our technology so that employees may be less dependent upon traditional offices. This is especially important given the nature of our business. Our employees interact with our customers on their land on a routine basis. Vehicles would be equipped to provide full information, mapping and communications to give the employee full capability to provide technical services and public

safety outcomes.

Budget Component	2013 GF	2013 NGF	2014 GF	2014 NGF
Base	14,302,210	12,061,492	14,302,210	12,061,492
Changes to Base	604,999	10,113,255	723,692	573,347
Total	14,907,209	22,174,747	15,025,902	12,634,839

Agency Goals

- Protect the citizens, their property, and the forest resource from wildfire.

Goal Summary and Alignment

The Commonwealth's forest lands will be protected from damages resulting from wildfires. Virginia will be a national leader in the effort, by ensuring the DOF has adequate suppression equipment and radio communications to effectively interoperate with local, state, and federal agencies, sufficiently trained personnel, an appropriate fire prevention program and trained staff in arson and law enforcement prepared for the changing needs in wildfire protection and wildland/urban interface. This goal aligns directly with the agency's mission to protect the forest resources.

Long Term Goal

Be a national leader in the preservation and enhancement of our economy.

Societal Indicator: Emergency Preparedness

Protect the public's safety and security, ensuring a fair and effective system of justice and providing a prepared response to emergencies and disasters of all kinds.

Societal Indicator: Emergency Preparedness

Protect, conserve and wisely develop our natural, historical and cultural resources.

Societal Indicator: Emergency Preparedness

- Protect, promote, and enhance forested watersheds, non-tidal wetlands and riparian areas.

Goal Summary and Alignment

Provide technical services, best management practices information, and silvicultural activity enforcement on the Commonwealth's forest watersheds, non-tidal wetlands, and riparian areas to ensure the quality of drinking and recreational waters from these areas for future generations.

Long Term Goal

Protect, conserve and wisely develop our natural, historical and cultural resources.

Societal Indicator: Water Quality

- Improve the stewardship, health and diversity of the forest resource.

Goal Summary and Alignment

Provide information, advice and scientific-based recommendations to help landowners make informed decisions about their forest resources, which result in healthy, vigorous trees and forests on private land.

Long Term Goal

Be a national leader in the preservation and enhancement of our economy.

Societal Indicator: Business Climate

- Conserve the forestland base.

Goal Summary and Alignment

Reduce the rate of conversion of forests with important conservation value by identifying those forest lands that provide the greatest combination of economic and environmental benefits. Provide technical assistance and information on the conservation methods available, and by accepting working forest conservation easements. When federal grants are available, DOF also becomes involved with fee simple acquisitions.

Long Term Goal

Protect, conserve and wisely develop our natural, historical and cultural resources.

Societal Indicator: Land Preservation

- Promote forest industry and diversified markets for forest landowners including ecosystem service markets.

Goal Summary and Alignment

The forest industry is the largest manufacturing sector in Virginia and provides economic benefits to communities and citizens in every county and city in the state. The majority of the forestland in Virginia is owned by private citizens. If forest landowners are to continue to own and manage forests in a healthy, sustainable way they will need to receive benefits or forests may be converted into other uses. By fostering a strong forest products industry and providing diversified markets and benefits, this goal aligns with the Agency's Mission to protect and develop healthy sustainable forest resources. Markets for ecosystem services, such as water quality, air quality, and carbon sequestration, provide a financial opportunity for forest landowners. These markets are very important by providing additional tools and incentives to curb the loss of Virginia's forestland.

Long Term Goal

Be a national leader in the preservation and enhancement of our economy.

Societal Indicator: Employment Growth

- Collect, maintain and disseminate forest resource inventory information and applied research.

Goal Summary and Alignment

DOF will deliver spatial and statistical forest resource data, coordinated with accurate, timely field-based forest resource information, dedicated to remote sensing, and Web-based information and marketing outreach to assure the public's awareness of the value and importance of Virginia's forests and to improve the health and quality of life for Virginia citizens. This goal aligns directly with the agency mission to protect and develop healthy, sustainable forest resources for Virginians.

Long Term Goal

Be a national leader in the preservation and enhancement of our economy.

Societal Indicator: Business Climate

Protect, conserve and wisely develop our natural, historical and cultural resources.

Societal Indicator: Business Climate

- Manage agency resources to effectively and efficiently accomplish the strategic initiatives.

Goal Summary and Alignment

Ensure DOF has sufficient employees with the right skills and knowledge to be a world-class forestry organization capable of meeting the challenges and needs in Virginia; who are equipped with technology and tools, and possess excellent communication skills to provide the highest quality forest management assessments and recommendations and ensure a better informed private landowner. Provide for the most effective and efficient management of DOF State Forest and nursery production resources.

Long Term Goal

Be recognized as the best-managed state in the nation.

Societal Indicator: Government Operations

Programs and Service Areas for Agency

- 50102: Reforestation Incentives to Private Forest Land Owners
- 50103: Forest Conservation, Wildfire & Watershed Services
- 50104: Tree Restoration and Improvement, Nurseries & State-Owned Forest Lands
- 50105: Financial Assistance for Forest Land Management

Customers

Pre-Defined Customer Group	User Specified Customer Group	Customers Served Annually	Potential Annual Customers	Projected Trend in # of Customers
Resident	General Public	500,000	8,000,000	Increase
Farm/Forest Owner	Private Forest Landowners	8,000	350,000	Increase
Local or Regional Government Authorities	Local Governments	115	146	Increase
State Agency(s),	Other State Agencies	20	30	Increase
Higher Education Institutions	State Universities	26	60	Increase
Federal Agency	Federal Agencies	8	10	Increase
Organization	Fire Departments	712	765	Increase
Local or Regional Government Authorities	Local Planning Districts	10	23	Increase
Organization	Non-Governmental Organizations	26	60	Increase
Higher Education Institutions	State-Supported Educational Organizations	19	25	Increase

Employer/ Business Owner	Forest Industry & Associated Businesses	2,500	15,000	Increase
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Key Risk Factors

Forestry and forest products face some long-term resource management challenges. Although not an immediate concern because of surplus forest inventory, continued urban sprawl and fragmentation of forest and expanding non-industrial ownership patterns point to the likelihood that the quality and availability of timber stocks will decrease at some point and costs of harvesting will increase. When land is conserved through agricultural and open space conservation easements, restrictions are often placed on forestland management. The industry also faces more formidable challenges in combating pests and disease, invasive species, air pollution, and changes in forest ecology from fire suppression, which are taking an increasing toll on Virginia forests.

The industry also must contend with increasing international competition and mounting regulatory and consumer scrutiny. International competitors are making continued inroads into hardwood furniture and now even previously insulated forest products such as office furniture, upholstered furniture, and flooring. Mounting federal regulations governing water and air quality are increasing production costs. Local ordinances can sometimes encumber logging activities. Third-party certification of wood products to ensure compliance with ecologically sustainable forest management practices may increase the complexity and costs of forest management, presenting significant barriers to participation for some landowners.

Despite these challenges, the outlook for the industry is now largely on the upside. Substantial industry restructuring has already occurred. Virginia has formidable forestry and forest product manufacturing locational advantages that will persist. Moreover, the industry is primed to grow again as the general economy recovers, the housing market improves, firms continue to adapt new production processes, and firms exploit new product and service markets and recover some ground lost to international competition.

The furniture industry in the Southside region of Virginia and Piedmont region of North Carolina grew to be a significant employer for a number of reasons, including the quality and availability of timber, good transportation infrastructure, and the cost and quality of labor.

New and emerging markets are also important. Growth in the green design and construction sector has increased demand for sustainably produced wood and local wood products. The creation of ecosystem services markets such as nutrient or carbon credit trading to reduce pollution could also benefit forestland owners. New opportunities may exist also for professional forestry-related services that cater to urban and suburban customers in such areas as harvesting and thinning, marketing, and other areas. Furniture and other forest products firms might develop new markets by placing more emphasis on design, customization, fostering efficient supply chains and supplier relationships, and building long-term customer service relationships through service agreements.

Biomass energy production has emerged in recent years as a promising new market for surplus wood residues. Federal clean and renewable energy programs and Virginia's voluntary Renewable Portfolio Standard offers incentives to the state's power companies to produce electricity from renewable resources. Virginia had seventy-one facilities producing electricity from woody biomass in 2011. The largest electricity producer was the 79MW Pittsylvania Power Station, which has since been joined by a Wise County co-firing plant that produces 55MW from wood. Several additional plants have been planned that would collectively add 275MW in capacity.

Current Trends Impacting Forestry:

- On a rolling 10-year average, Virginia is losing an estimated 16,000 forested acres annually to conversion;
- Total timber production more than doubled and market prices peaked in the 1990's;
- Number of timber harvests is increasing, while harvested acres are decreasing;
- Increased harvests require greater water quality monitoring and inspections;
- Fire risk for Virginia woodland homes is increasing rapidly; and
- In every model used, the acreage of forestland in the South is predicted to rapidly decline.

Products and Services

Virginia's forests are diverse and productive. Virginia is a major producer of both softwood and hardwood timber. Forest Inventory Analysis (FIA) data indicates timber growth continues to outpace removals, particularly for hardwood species. Consequently, the 2010 forest inventory indicates that Virginia now has approximately 15.4 million acres of timberland, up from 15.3 million in 2006.

In June of 2013, the Weldon Cooper Center for Public Service at the University of Virginia updated a 2008 study of the economic impacts of forest industries in the Commonwealth. In this study they attempted to quantify economic contributions as well as forest recreation impacts and beneficial environmental affects. They found that the forestry sector had a total impact of over \$17 billion in total industry output, approximately 103,800 jobs, and \$8.8 billion in value-added.

Virginia's forested landscapes provide important environmental services and other social economic benefits to the Commonwealth. These benefits include improved water quality and flood control, air quality, conservation of wildlife habitat, containment of urban sprawl, preservation of scenic beauty, and maintenance of a sense of place. An attempt to quantify the value of water and air quality environmental services using the value transfer approach suggests that the Commonwealth receives approximately \$6.385 billion in value from forestry in these ecological services alone. In addition, the Commonwealth's forests are important assets for Virginia's tourism industry.

Virginia's forest industries have historically been among the Commonwealth's largest industries and continue to play a significant role in the Virginia economy. The impact of these sectors is felt far beyond the forest plantations and tracts where the trees are grown and harvested. Value-added industries such as the forest products industries also rely on Virginia timber as inputs to production. The growing/harvesting and processing sectors purchase production inputs, labor, and other value-added services from Virginia-based businesses, households, and institutions. These purchases cause a ripple effect in the Virginia economy when the money is re-spent.

Virginia's 22 state forests totaling 67,920 acres provide for opportunities for outdoor experiences far removed from many of the distractions found in more densely populated areas. Hunting, fishing, hiking, horseback riding, mountain biking, adventure races, orienteering and bird watching are popular recreational activities. No tax-supported general fund revenue support the State Forests.

The year 2012 has been mixed concerning forest health news in Virginia. Traditional pests such as gypsy moth and southern pine beetle have been on the decline while new pests such as the emerald ash borer (EAB) and the recently discovered thousand cankers disease (TCD) of black walnut threaten to spread further destruction. Virginia has thinned about 40,000 acres of loblolly pine out of approximately 130,000 acres estimated to be overstocked - stands that are the most vulnerable to attack. EAB has since spread to at least 17 counties across the Commonwealth and is also been found this year to be causing widespread ash mortality in several forested areas. We face the prospect of losing all ash species from natural and urban landscapes in the forthcoming decades. TCD which was discovered in 2011 around the Richmond area and in Fairfax and Prince William counties this year, threatens black walnut trees in urban and forested settings and there are no effective controls available to protect trees.

DOF research is conducted in four areas: tree improvement, diminished species, pine silviculture, and hardwood research. The tree improvement program develops the loblolly pine seedlings grown at our nursery that are sold to the landowners of the Commonwealth for reforestation efforts. DOF is the only organization in Virginia actively improving the growth and quality of loblolly pine, a major commercial species, through genetic improvement. These efforts have resulted in a superior growth rate of 25 to 60 percent greater wood volume. In addition, DOF actively supports efforts to study and restore diminishing species such as American chestnut, longleaf pine, and shortleaf pine.

DOF produces tree seedlings in its two nurseries to provide a source of native forest trees for future forest crops. Approximately 24 million loblolly pine seedlings, other pine species, and a variety of hardwood seedlings are grown and sold to private forest landowners and forest industry. No tax-supported general fund revenues support the nursery program.

Trends

Rankings & Customer Trends

Virginia's forests are primarily owned by private individuals who make up 63% of forested land holdings. Surprisingly the forest industry sector only owns 1% of forested land holdings with the corporate sector and the public sector each owning 18%. The public sector is comprised of Federal, State, and local governments. These landowners make up DOF's primary customers, who are served with technical and scientific forest management recommendations and protection from forest fire damage. Traditional lumber, furniture and paper & paper companies, and newly emerging biomass energy and other new forest products depend upon the private sector forests for their raw material supplies. DOF serves as an important catalyst by working to bring the private sector together with the best technical guidance and incentives to continue sound forestry investments.

Trend Name	Trend Area
Number of Forested Acres	Decrease
Forest Products Volume	Increase
Forest Market Prices	Decrease

Performance Highlights: Service Performance & Productivity Initiatives

1. The Virginia Department of Forestry (DOF) is a recognized national leader in its delivery of wildfire suppression, incident management and personnel development training for emergency responders. The Interagency Wildfire Academy is one of the four largest in the nation and has provided training to more than 350 students representing more than 11,000 hours of total training.
2. The main goal of Firewise is to educate homeowners in the wildland/urban interface on how to design, construct, landscape and maintain their homes and property to avoid destruction during a wildfire. DOF has been a leader nationally in the promotion and expansion of the Firewise Program.
3. Several indicators determine whether Virginia's private and public forests are healthy and are being managed sustainably. Overall, the current net growth of live volume exceeds removals by a ratio of nearly two to one. In terms of overall volume harvested annually from Virginia's forest resources, Virginia ranks 6th in the nation (behind GA, AL, NC, AR and SC). For softwood only production, we are 7th in the nation; while for hardwood only production, we are 2nd in the nation (behind NC).
4. Twenty two State Forests in multiple counties comprising 67,920 acres of working forest land available to the public for recreation, while providing timber products for the forest industry, and revenue to local government for their administration.
5. A DOF employee earned the "Most Innovative" national award in the inaugural Chesapeake Forest Champion contest created as part of the United Nations' International Year of Forests for "Generation Next" - a family forest transition short course that provides forest landowners with the information and tools they need to ensure a smooth intergenerational transfer of their property while keeping critical forests intact.
6. The DOF water quality program has been touted as the leading water quality program in the South. DOF is the leader in the statewide logging inspection audit program in the South and is supporting a Southeastern Regional attempt to provide consistent auditing of logging jobs across State boundaries.
7. Two forest tree seedling nurseries producing approximately 30 million hardwood and softwood tree seedlings for reforestation and general conservation. Seedlings are available for sale to private land owners and industry owners to help with their reforestation needs and providing future forest products' raw materials.

Management Discussion & Analysis

Future Direction, Expectations, and Priorities

DOF is an active partner in the effort to gain better information and data analysis on Virginia's forest resources and create tools and analysis tools for business and policy decision making. DOF will encourage active scientific management of private forests and maintaining working forests to provide forest land base for future forest products, and conducted in an environmentally sensitive way.

Forest inventories are ongoing projects and the results are used for business and policy-making decisions. Efforts are ongoing to understand the reasons that forest harvests are increasing while reforestation is decreasing in the southern coastal and piedmont areas.

Future challenges will include forest markets; public safety; loss of forestland, and concerns on the sustainability of the resource. DOF will face new, increased difficulties with forest fire suppression as more homes are built in forests and the average tract size decreases. New and more effective public information and communications campaigns will be required to address the dangers with the landowners and the public. Public safety will remain a major goal of DOF.

50102: Reforestation Incentives to Private Forest Land Owners

Description

This service area consists of administering the Reforestation of Timberlands Act (RT) and implementation of the cost-share program pursuant to 10.1-1170 through 10.1-1176 in the Code of Virginia. This service area is available as a result of a self-imposed forest products tax by the forest products industry. The agreement is between the General Assembly and the forest products industry in Virginia and was designed to meet the shortfall of pine resource forecasted by forestry leaders. At the time of the RT Act enabling legislation, it was widely recognized that more pine timber resources were being harvested than being reforested. It is the RT Act which caused the reverse in the decline of the pine resource by providing financial incentives to the private landowners to invest in pine reforestation across Virginia.

The Department of Forestry (DOF), upon request of a landowner, examines timberland and makes recommendations concerning reforestation. DOF may make available to landowners, with or without charge, use of specialized state-owned equipment and tree seedlings, materials, and services of professional personnel for the purpose of preparing land for reforestation and reforesting land devoted to growing timber, in accordance with administrative regulations.

Upon the completion of each separate reforestation project in accordance with the recommendations and approval of the State Forester, DOF determines the total cost of the project including money paid or payable to a contractor for services performed on the project, for labor, and for other costs incurred by the landowner, including a standard rental rate value for use of state-owned equipment and the cost of tree seedlings, materials, and specialized state personnel used on the project. The State Forester, from funds appropriated for the purposes of this article, may pay to the landowner an amount not to exceed 75 percent of the total cost of the project.

Mission Alignment and Authority

This service area aligns directly with DOF's mission to protect and develop healthy, sustainable forest resources for Virginians. DOF encourages greater reforestation in the Commonwealth through the authority to offer financial incentives to forest landowners to invest in trees for the long term. In addition, this area aligns directly with the long-term objectives for Virginia to protect, conserve and wisely develop our natural, historical, and cultural resources.

Customers for this Service Area

Anticipated Changes to Customers Base

DOF will probably experience an increase in the number of private forest land owners requesting assistance and service due to parcelization of forested tracts as forest products companies divest themselves of land and family owned forest lands are passed on to the next generation. Forest Inventory data for the past four years has shown demand for softwoods by industry in Southside Virginia has paced - and in some years surpassed - annual growth. This will put increased pressure on these privately-owned forests in transition to maintain or increase their output of forest products.

Current Customer Base

Pre-Defined Customer Group	User Specified Customer Group	Customers Served Annually	Potential Annual Customers	Projected Trend in # of Customers
Farm/Forest Owner	Private forest landowners	1,500	10,000	Increase

Partners for this Service Area

Partner	Description
Virginia Forest Industry	The forest products industry whose revenues are taxed, collected and set aside for the RT Act Fund is the primary partner. The forest industry recommended and accepted the self-imposed forest products tax to ensure future forest products in the Commonwealth. Because of the industry support, the Commonwealth only has to match the revenues used in reforestation efforts. This appropriation shall be deemed sufficient to meet the provisions of the Titles 10.1 and 58.1 of the Code of Virginia in the Appropriations Act.

Products and Services

Factors Impacting the Products and/or Services

Funding is the principal factor impacting products and services in this service area. Funding is provided from two sources. First, the forest products industry agreed with the General Assembly of Virginia to provide a law requiring a self-imposed timber products tax. The amount collected from the industry is by law to be matched by the general fund in a like amount and the total must be used to provide the establishment and improvement of the pine resource. This helps assure a pine resource will be available in the future. The collection of the forest products tax and the subsequent matching from the general fund can impact this service area.

The RT program is administered by employees of DOF. Full staffing is an important factor which can impact this service area.

Anticipated Changes to the Products and/or Services

When funds are decreased, the program will serve fewer private forest landowners with reforestation and forest improvement. Landowners may delay forestry projects or cancel the projects until funding is available.

Increases in funds have a positive effect on forestry and private forest landowner willingness to invest money into forestry long-term practices. The incentive from cost-share reimbursement helps reduce the initial costs and increase the financial return to the landowner, who must wait up to 20 years before the possibility of the first thinning and, coincidentally, the first potential revenue from the investment.

Listing of Products and / or Services

Provide forest management planning and scientific recommendations for reforestation to ensure appropriate tree species on the different sites and the proper silvicultural management of each.

Provide technical information and assistance to landowners to help landowners initiate reforestation establishment and improvement projects.

Assess forest resources of private landowners and provide specific recommendations to achieve desired reforestation and forest management results.

Facilitate the work of tree planting and tree improvement contractors who perform work for private landowners to ensure the work is completed in accordance with acceptable forestry guidelines.

Provide source for tree seedlings and plant materials to accommodate the specific forestry goal on private forest land.

Administer cost share assistance and guidance through state programs to private forest landowners.

Conduct assessments and checks to assure quality assurance on silvicultural projects of private forest landowners.

Follow-up with recommendations to improve silvicultural projects on private forest land.

Provide forestry information and education products and services regarding silvicultural operations to private forest landowners, and increase their awareness of available help and resources available to assist them.

Train internal staff and partners on appropriate silvicultural practices for private forest lands.

Track Reforestation of Timberlands planting and improvements on Virginia's private forest lands, and share accomplishment results annually.

Provide specialized forest establishment equipment for rental and use for reforestation work on private forest lands.

Support state nurseries by offering seedlings for planting through the RT Program.

Financial Overview

Budget Component	2013 GF	2013 NGF	2014 GF	2014 NGF
Base	447,570	1,398,686	447,570	1,398,686
Changes to Base	250,000	8,246	500,000	8,246
Total	697,570	1,406,932	947,570	1,406,932

Objectives for this Service Area

Objectives for this Service Area

Objective

Promote cost-share funding to plant pine trees and improve existing pine forests.

Description

The purpose of this objective is to ensure maximum use of the available Reforestation of Timberlands (RT) incentive funding by private forest landowners for approved tree planting and improvement practices.

Objective Strategies

- Identify acres to be improved under the RT Act.
- Review and revise RT Act budgeting and allocation methods.
- Use forest inventory analysis (FIA) data to target efforts on specific areas where data may suggest concerns with the amount of pine resource available.
- Use the logging inspection process to identify eligible tracts and promote the replanting of sites using RT cost share.

Alignment to Agency Goals

- Improve the stewardship, health and diversity of the forest resource.
- Promote forest industry and diversified markets for forest landowners including ecosystem service markets.

Measures

- Percentage of eligible Reforestation of Timberlands (RT) incentives received by landowners

Measure Class Measure Type Preferred Trend Frequency

Data Source and Calculation

Divide the amount of Reforestation of Timberlands (RT) incentives funding received by private landowners by the total RT incentive funding available. Refer to report of RT incentives allocated (FISC2200) in Department of Forestry (DOF) Information Management System (IMS).

50103: Forest Conservation, Wildfire & Watershed Services

Description

This service area truly provides for managing, conserving, and protecting Virginia's forest resources. This is the Department of Forestry's (DOF) largest service area and consists of the Divisions of Forestland Conservation, Forest Management, Resource Protection, and Resource Information. These Divisions provide a vast array of services and benefits to many stakeholders including landowners, industry, all levels of government, non-governmental organizations and the general public. The DOF covers the entire Commonwealth with its employees, resources, and equipment placement.

Summary and Important Products and services include:

1. Provide equipment and personnel to suppress and prevent wildfire and to respond to other State declared emergencies.
2. Enforcement of wildfire, silvicultural water quality, and forest seed tree laws.
3. Promoting best management silvicultural practices (BMPs) and preharvest planning to loggers and landowners to protect water quality.
4. Provide forest management advice and services to forest landowners for improvement of forest stands ensuring the sustainability of the forest resources.
5. Collect, summarize, analyze, and report forest inventory data on the status and condition of forest land in Virginia.
6. Provide resource information, maps, aerial photographs and Geographical Information Systems (GIS).
7. Monitor and report findings on the forest health of forest stands across Virginia to prevent or control insect and disease harmful to forests.
8. Provide certified burning manager training to individuals involved in the controlled application of fire to reduce forest fuels, site prepare cutover lands for reforestation, and to improve wildlife habitat. Support the continued expansion of Virginia's Prescribed Burning Council.
9. Provide timely and accurate forest resource information to help forest industry maintain vibrant forest-related businesses in Virginia.
10. Promote market opportunities for landowners in existing and emerging markets for wood products and ecosystem services.
11. Provide financial incentives through administering a variety of State and Federal cost-share programs and the riparian buffer tax credit to encourage implementation of forestry practices.
12. Develop, monitor, and enforce conservation easements on working forestlands.
13. Administer the Forest Legacy Program to fund land acquisition and easements.
14. Interact with local government to promote conserving the forest land base and the ecosystem service benefits that forests provide.
15. Provide outreach on forest benefits, programs, management, and protection.
16. Conduct applied forest research to develop and implement new techniques that enhance the value, health, and sustainability of Virginia's forests, and communicate results in reports, presentations, and field demonstrations.
17. Administer grant programs to reduce wildfire hazard in Virginia's wildland/urban interface communities and increase the rural water supply available for fire suppression needs through the installation of dry hydrants.
18. Mitigate the impact of lost forestland converted to development.

Mission Alignment and Authority

This service area directly aligns with the DOF's mission to protect and develop healthy, sustainable forest resources for Virginians. This service area directly supports eight strategic goals of DOF:

1. Protect the citizens, their property, and the forest resource from wildfire.
2. Protect, promote, and enhance forested watersheds, non-tidal wetlands, and riparian areas.
3. Improve the stewardship, health and diversity of forest resources.
4. Conserve the forestland base.
5. Promote forest industry and diversified markets for forest landowners including ecosystem service markets.
6. Collect, maintain, and disseminate forest resource information.
7. Manage agency resources to effectively and efficiently accomplish the strategic objectives.

This service area directly supports the following long-term objectives for Virginia:

1. Protect, conserve, and wisely develop our natural, historical, and cultural resources.
2. Protect the public's safety and security, ensuring a fair and effective system of justice and providing a prepared response to emergencies and disasters of all kinds.
3. Be a national leader in the preservation and enhancement of our economy.

Customers for this Service Area

Anticipated Changes to Customers Base

The privately held forest land in Virginia is expected to be owned by more individuals, while the average size land holding will decrease. DOF anticipates that its services will be expected by more customers as a result of this ownership change and an increased interest and need to better manage land holdings and improving our environment and quality of life. Decreasing funding will challenge DOF to meet increased customers' needs. DOF will strive to encourage incentives for land owners, including the acceptance of marketable ecosystem services from managed forestland, seek funding to improve and expand services for management and protection, and collaborate with partners to enhance the quality of forestlands.

Current Customer Base

Pre-Defined Customer Group	User Specified Customer Group	Customers Served Annually	Potential Annual Customers	Projected Trend in # of Customers
Resident	General Public - all	200,000	7,000,000	Increase
Farm/Forest Owner	Private landowners	6,000	300,000	Increase
Local or Regional Government Authorities	Local Governments - all	100	100	Stable
State Agency(s),	Department of Conservation & Recreation (DCR), Department of Environmental Quality (DEQ), others	12	12	Stable
Federal Agency	Federal Land Management - United States Forest Service, United	4	4	Stable

	States Fish & Wildlife Service, other			
Volunteer	Fire Departments - all voluntary and many paid Virginia fire departments	712	765	Increase
Non-Profit Agency (Boards/Foundation),	Non-Governmental Organizations - Virginia Forestry Association (VFA), Virginia Forest Products Assoc	20	50	Increase
Higher Education Institutions	State Universities - Virginia Tech (VT), Virginia State University (VSU), others	8	39	Increase
Employer/ Business Owner	Forest Industry & Associated Businesses - all	6,500	15,000	Increase
Employer/ Business Owner	Loggers	1,200	3,000	Increase

Partners for this Service Area

Partner	Description
Federal Agencies: United States Forest Service (USFS), National Park Service (NPS), United States Fish & Wildlife Service (USFWS), Natural Resources Conservation Service (NRCS)	Cooperative agreements, cost-share funding, and consolidated grants for fire, forest health monitoring, Chesapeake Bay and other watersheds, forest management, ecosystem services, wildfire, and forest health initiatives and programs.
Local governments	County governments and Planning District Commissions interested in maintaining their forest resources and the ecosystem services they utilize accurate and timely forest resource information in their planning processes.
Non-governmental Organizations	These groups represent a strong partner base in land conservation, urban and community forestry, ecosystem services, and forest management efforts.
Public School system	DOF makes presentations to young students about the importance of the forest and its protection. Schools provide time for DOF staff to attend the schools for the program presentations.
State Agencies	Partnerships are critical for implementing initiatives and obtaining funding.
Universities	Cooperative/collaborative research and extension efforts with VT, VSU, Longwood, Old Dominion University (ODU), Dabney Lancaster, Institute for Advanced Learning & Research (IALR) in Danville, etc.
Voluntary Fire Departments	Voluntary fire departments assist DOF with suppression of wildfires. DOF provides training, equipment and grant funds to assist fire departments.

Products and Services

Factors Impacting the Products and/or Services

Many factors impact the largest service area for DOF. This service area has the greatest number of DOF employees engaged in its success. Employees properly trained and motivated to the delivery of the products and services are essential to its success. Reductions in staff due to resignations, retirements, and budget cuts can impact products and services. These factors may necessitate the need for personnel to cover multiple counties. Additional funding is necessary to recruit, train, and retain qualified employees.

Finding dedicated funding to consistently replace equipment through purchase or lease will be a key in being able to provide a fleet of vehicles and dozers that are ready to meet the emergency response duties of the Agency. This is especially true in budget reduction years.

Forest land lost to other non-forest uses also continues at a rapid pace (approximately 27,000 acres per year are being converted to non-forest use per year). Parcelization, the division of forest land into smaller and smaller ownerships, occurs along with conversion. Both these trends will likely result in a decrease for traditional forestry services and an increase in demands from small woodlot landowners.

The loss of the forest land base, significantly reduces the flow of ecosystem services and benefits derived from our environmental infrastructure. This creates a twofold problem. First, we must better manage the remaining acres of forestland in an attempt to partially offset these losses. Second, society will incur greater costs for engineered solutions in our efforts to provide clean air and clean water to the citizens of the Commonwealth. Forestland is a critical solution to the economy of rural Virginia and the overall economic and environmental health of the Commonwealth. Ecosystem services outreach requests and interest in developing market-based conservation initiatives continues to grow. In the future market-based conservation will become an important mechanism to finance conservation and financially reward landowners for managing their properties in ways that ecosystem services are enhanced.

Funding for cost-share programs is an important factor which impacts the outcomes of this service area. Private landowners count on cost-share reimbursement for forestry practices. Funding for the cost-share programs should be consistent with the level of need and inflation adjusted to advance products and services in this service area. Funding for land conservation in Virginia consists mainly of tax benefits for landowners who donate land or easements. Continued interest in conservation will be significantly determined by changes in tax policy at the county, State, and federal level.

Because land use decisions are determined primarily by local governments, impacting forest conversion on a large scale will require outreach to and influencing the local planning process. Quality training is necessary to insure that a workforce of knowledgeable employees have the latest technical information and are able to effectively communicate appropriate forest resource assessment information and management recommendations. The DOF's ability to transfer information significantly impacts the recognition of the importance of the forest resource and the implementation of forest management practices and the incorporation of forest related considerations in land use planning.

In addition to utilizing the agency-owned plane, it may be necessary to contract for aircraft services to perform agency duties for insect and disease monitoring as required under Chapter 11, Article 11, §10.1-1177 - 1181. Also, with increased reporting of insect and disease activities through Integrated Forest Resource Information System (IFRIS) enhancements, it is expected that staff time available to respond to these reported pest issues will be impacted.

Anticipated Changes to the Products and/or Services

DOF expects to see increases for its services in all aspects of this service area. Forest industry is selling off more forest land to Timberland Investment Management Organizations (TIMOs), Real Estate Investment Trusts (REITs), and private individuals. This shift away from a vertically integrated forest industry will have significant impacts on forestland conversion rates, forest fragmentation and parcelization, and the number of forest landowners. This means more forest landowners owning smaller

parcels of land and therefore more requests for forest management assistance.

As logging continues to occur across more, and smaller ownerships, an increase in harvest inspections and the demand for assistance with preharvest planning and enforcement of the water quality laws and procedures could occur.

Recent changes to the Logging Notification requirements will require more logger training and assistance in adjusting to the new requirements.

Recent developments at the State and Federal level to improve the water quality of the Chesapeake Bay will create increasing interest in riparian buffer plantings, applications for the riparian buffer tax credits, and afforestation. Afforestation is the practice of planting new forests on lands that are currently open.

Efforts in voluntary mitigation to offset forests lost to development, employing forest conservation specialists, and increased awareness of the DOF's conservation easement program, is resulting in a significant increased demand on staff resources to develop, monitor and enforce donated easements. The Forest Legacy program also contributes significantly to the easement workload. Demand currently exceeds capacity and there are areas where DOF presence is minimal. Increased outreach by DOF could further increase demand. Continued success in accepting conservation easements will result in increased need for easement monitoring and enforcement. Adequate funding to meet these increasing needs over time will be necessary.

As forestland becomes increasingly fragmented and IFRIS reporting is enhanced, the DOF expects an increased interest and demand for information regarding non-native species control or eradication. Efforts are already occurring to create market opportunities for some non-native species such as ailanthus.

DOF expects increased demand for more native species tree establishment and restoration. Restoration of species such as shortleaf pine, longleaf pine, and American chestnut continue to be an area of emphasis for the agency.

DOF expects strong increased demand for timely forest resource information for planning and land-use decision making. The agency continues to be active in partnering with county governments, planning district commissions, river basin commissions, and non-governmental organizations in efforts to keep working forests on the landscape and reduce the rate of forestland conversion.

Participation in climate change discussion and planning efforts has significantly increased recently. The DOF is being recognized as an important source of information for data on forest carbon sequestration rates, climate change planning and developing carbon offset protocols.

Listing of Products and / or Services

Provide experienced all-risk incident management teams for the Commonwealth to provide assistance to Virginia Department of Emergency Management when disasters or emergencies occur.

Delivery of wildfire prevention information/advertisement campaigns through radio, television, newspaper and multi-lingual media sources to make the public aware of forest fire open air fire law, dangerous forest conditions and safe use of the forest.

Provides cost-share assistance to private forest landowners for management practices to reduce the risks of southern pine beetle infestation including pre-commercial thinning and restoration of longleaf pine on acceptable sites.

Provide landowner assistance necessary to increase the establishment of riparian forest buffer plantings in the Commonwealth's Chesapeake Bay and southern river watersheds.

Provide woodland home community wildfire hazard assessment and mitigation recommendations.

Provide oversight of Virginia Dry Hydrant program, which currently installs 65 dry hydrants annually for local/community fire suppression needs.

Acquire and provide federal excess personal property for loan to fire departments across the Commonwealth to increase suppression capabilities.

Provide trained Forest Engineers and Water Quality Specialists with specialized knowledge of forest hydrology, watersheds, civil engineering, and best management practices.

Offer prescribed burning training and certification to burning managers and provide leadership as part of the Virginia Prescribe Fire Council.

Participate in the development of ecosystem service markets for services provided by forests such as water and air quality.

Exploring, developing, and providing incentives to conserve forest land and maintain working forests.

Provide specialized forest firefighting equipment, such as bulldozers equipped for forest conditions and the trucks capable of transporting the bulldozers and other equipment.

Forest landowners request and receive inspections, information and recommendations on forestry management for their property. DOF foresters and technicians are available to provide these inspections, reports and assistance to the 300,000 potential forest landowners.

Forest landowners request federal and state cost-share assistance for forestry practices on their property. DOF foresters and technicians provide the required inspections and approval of the landowner practices before the final cost-share award is made to the landowner. DOF is often involved in the oversight and coordination of the project to ensure the practice is implemented according to the approved plan. DOF staff makes the final inspection of the completed practice and approves the cost-share payment or assist landowners to correct deficiencies.

Coordination of regional tree planting contract and makes available forest seedlings for sale to forest landowners. This service ensures the forest landowner receives tree planting service from reputable vendors at the lowest price. DOF supplies the tree seedlings from its nurseries ensuring the highest quality, genetically superior seedling available for Virginia sites.

Foresters and technicians inspect all harvest operations to ensure consistent enforcement of the Virginia Seed Tree Law. This law applies to certain species of pine trees and was created to ensure these valuable Virginia species are maintained in Virginia forests into the future.

The Forest Inventory Assessment team collects forest resource information from 20% of the forest inventory plots across Virginia each year. This rate of information collection allows DOF to complete an assessment every five years. The information includes estimated tree volume, species composition, age distribution, and size of Virginia's forest land base. The improved technology in satellite imagery allows DOF to document land pattern trends and changes in "real time" for policy and decision makers.

Using the latest Geographic Information System (GIS) tools, Integrated Forest Resource Information System (IFRIS) and Global Positioning Satellite (GPS) units, DOF employees make sophisticated maps for their reports and add the latest layers of information available on the tract.

Provide comprehensive insect and disease investigation and monitoring across Virginia. DOF is mandated to report infestations and recommend prevention or control measures to protect valuable species of forest trees. In the past, DOF has monitored species such as gypsy moth, pine bark beetle, oak wilt, chestnut blight, emerald ash borer, and many other insects and diseases.

Conduct applied forest research to provide continuously improving recommendations for forest practices in Virginia. The results are communicated to the public in written reports and workshops used by DOF staff in their recommendations to landowners, forest industry, and the general public to improve their forest land.

Offer specialized training to firefighters across the Commonwealth to maintain firefighter's knowledge and skills at the highest level and to ensure that firefighters operate safely to protect themselves and other people.

Forest Producers are now eligible for cost-share to protect water quality on timber harvest operations. The DOF Water Quality personnel are directly responsible for assisting operators on the type and cost of practices to be implemented to protect water quality at stream crossings. The DOF Water Quality personnel inspect and approve all cost-share projects for water quality protection.

Enhance and develop market opportunities for Virginia's forest products. This includes both traditional forest products and specialty, niche products.

Provide and develop information related to forestry industry.

Develop, hold, monitor, and enforce conservation easements provided either through donation or partial purchase.

Administer the U.S. Forest Service Forest Legacy Program in Virginia for land acquisition and conservation easements. This involves ranking submissions, submitting projects, and utilizing available Forest Legacy funding.

Provide outreach through conferences, seminars, presentations, pamphlets, etc. to all stakeholders to increase awareness of ecosystem services. This includes developing and providing the tools to quantify ecosystem services for market and land use planning efforts.

Serve in a support and advisory role with various climate change initiatives.

Provide technical guidance and perform project ranking for the forestry category of the Virginia Land Conservation Fund grant program.

Provide outreach and guidance to local governments and land owners regarding the threat of forest land conversion and the tools available to slow conversion. Review local Comprehensive Plans and provide guidance regarding forest land conservation.

DOF realized the need for a professional forestry response to communities after the urban forest destruction caused by Hurricane Isabel to Richmond and Tidewater in 2003. The Urban and Community Forestry (U&CF) Program, in cooperation with U&CF programs in other states, have trained a number of its employees and other professional arborists/urban foresters in urban storm response as members of "urban forest strike teams (UFSTs). The storm response takes the form of post-storm evaluation of residual trees in accordance with FEMA standards. DOF has utilized its employees to respond to storm events in several states beginning in 2008. It will continue to participate as members of the 13 state southern region UFSTs and respond to storm events when requested. DOF is also in the process of coordinating this function with activities of the Virginia Department of Emergency Management (VDEM) and will integrate with VDEM on a formal basis once the needed protocols are established. DOF will continue to offer UFST training to its employees and other Virginia partners as new trainings occur.

Financial Overview

Budget Component	2013 GF	2013 NGF	2014 GF	2014 NGF
Base	13,854,640	7,279,268	13,854,640	7,279,268
Changes to Base	354,999	10,089,934	223,692	496,256
Total	14,209,639	17,369,202	14,078,332	7,775,524

Objectives for this Service Area

Objectives for this Service Area

Objective

Promote development of new and emerging forest markets.

Description

The markets that forests support are critical to the economy of Virginia. Expansion of new and emerging forest markets are critical in insuring a viable forest industry exists in the Commonwealth. Emerging markets for ecosystem services and benefits derived from forests are becoming increasingly important to meet the environmental demands on air and water quality. Private landowners own the majority of forestland in Virginia. Sustaining and developing robust forest markets provides opportunities for private landowners and provide justification for maintaining their forestland ownership.

Objective Strategies

- Assist forest industry in identifying concerns and opportunities and develop associated strategies for implementation.
- Develop grant opportunities to secure funding for project level initiatives that promote forest markets.
- Develop tools for quantifying ecosystem services that can be used in land use planning, mitigating land conversion activities, and market participation.
- Identify and promote opportunities for forestland owners, industry and public to participate in the use of bio-energy.
- Maintain up-to-date economic and industry data on the importance of forests and forest industry.
- Promote forest markets through presentations and participation in workshops, seminars, conferences, and trade shows.
- Promote opportunities for private landowners to participate more in certified forest markets.

- Work with partners to identify and distribute information on new and changing forest markets.

Alignment to Agency Goals

- Improve the stewardship, health and diversity of the forest resource.
- Conserve the forestland base.
- Promote forest industry and diversified markets for forest landowners including ecosystem service markets.

Measures

- Number of new and/or expanding forest related businesses or markets

Measure Class Measure Type Preferred Trend Frequency

Data Source and Calculation

Data will be collected from the Department of Forestry's (DOF) Integrated Forest Resource Information System (IFRIS) and maintained on an excel spreadsheet.

Objective

Reduce the forest land burned by wild fires.

Description

Reduce the number of human caused forest fires. Provide ample incentives and information available to the public to wisely manage fire use and to eliminate its use when conditions are favorable for the spread of forest fires. Use prevention messages and tools effectively to educate the public about dangers of fire usage.

Objective Strategies

- Agency Forest Fire Readiness and Mobilization plan will be in place during the spring and fall fire seasons to maintain a state of high wildfire readiness.
- Complete 12 new Community Wildfire Protection Plans (CWPP) and carry out 12 wildfire hazard mitigation projects in high wildfire risk communities.
- Maintain equipment in the best possible condition to make timely, safe and effective responses to forest fires and emergencies.
- Maintain the physical fitness and training of employees at best possible level to ensure timely, safe and effective responses to forest fires and other emergencies.

Alignment to Agency Goals

- Protect the citizens, their property, and the forest resource from wildfire.

Measures

- Percentage of wildfire responses that are 30 minutes or less

Measure Class Measure Type Preferred Trend Frequency

Data Source and Calculation

The measure is calculated based on information from Department of Forestry (DOF) wildfire incident reports which are entered into DOF's Integrated Forest Resource Information System (IFRIS) by DOF employees. The goal of this measure is to reduce the number of fires that DOF does not respond to within 30 minutes. It is expressed as a percentage to mitigate the influence of weather-related factors on our performance. The measure is determined by dividing the number of wildfire responses that exceeded 30 minutes by the total number of wildfire responses.

Objective

Increase the number of forest management projects implemented on private land.

Description

Increase the amount of forestry management and conservation work implemented on private forest land to provide healthy forests in the future. Forestry practices include tree planting, thinnings, forest stand management, forest stand establishment, wildlife habitat practices, community and urban tree planting, erosion and water quality control, cultural practices and protection to improve the health, vigor, and performance of trees, and provide economic and environmental benefits.

Objective Strategies

- Develop educational materials and programs and use these to raise landowner awareness of the need for and methods available for forestland conversion.
- Focus efforts on afforestation of non-forested lands in all areas for multiple resource benefits.
- Implement wildlife habitat projects per plan guidelines and in consideration with the State Wildlife Action Plan.
- Regenerate and improve forests, with added emphasis in priority areas by implementing silvicultural practices as outlined in forest management plans. Focus project implementations on tracts covered by active stewardship or equivalent plans and promote certification through the Certified Stewardship process or other certification program.

Alignment to Agency Goals

- Improve the stewardship, health and diversity of the forest resource.

Measures

- Number of forest management projects implemented on private land

Measure Class Measure Type Preferred Trend Frequency

Data Source and Calculation

A forestry management and/or conservation project is a project implemented on private land by the Department of Forestry (DOF) or by the private

landowner as a result of a recommendation made for that land. Qualified projects include forest stand management, forest stand establishment (including natural stand establishment), wildlife habitat practices, community and urban tree planting, erosion and water quality control. The information is gathered in our Integrated Forest Resource Information System (IFRIS) by DOF personnel.

Objective

Increase the amount of forest management assistance on private lands in the Commonwealth.

Description

Forest land is a critical solution to the economy of rural Virginia and environmental benefits for the Commonwealth. The majority of the forest land in Virginia is owned by private landowners (77%). The Department of Forestry (DOF) will strive to bring forest resource management planning to all landowners to ensure maximum benefits are achieved.

Objective Strategies

- Assist landowners in placing working forest conservation easements on forested properties, particularly for lands ranked as high in forest conservation value.
- Develop and promote voluntary mitigation strategies and plans that include forest management practices to help mitigate the loss of forestland as a result of land development and land conversion.
- Focus plan preparation in high priority areas.
- Identify and develop management plans for municipal, county and other public lands.
- Maintain the number of new forest stewardship plans.
- Prepare professional management plans for landowners.
- Update State Lands forest stewardship plans on 10% of tracts and initiate recommended projects.
- Utilize funding from federal, state and other sources when available to purchase conservation easements or fee simple interest in land, focusing on lands ranked as high in forest conservation value.
- Utilize geographic information system (GIS) analysis to rank all forested acres in the state by priority for forest conservation based on the multiple benefits provided by that forest and the threat of conversion of that forested area.
- Work with conservation partners, local governments and other authorities to identify land conservation strategies (i.e. green infrastructure) that could find wider application at the state or local level.

Alignment to Agency Goals

- Improve the stewardship, health and diversity of the forest resource.
- Conserve the forestland base.

Measures

- Number of acres of all forest management plan types achieved on private and appropriate public forest land

Measure Class Measure Type Preferred Trend Frequency

Data Source and Calculation

Data will be collected from the agency's Information Management System (IMS) and Integrated Forest Resource Information System (IFRIS) reports. Data will include stewardship plans, cost share plans, Alternate Management Plans, community forest management plans, Tree Farm Plans, and Natural Resource Conservation Service (NRCS) Conservation Activity Plans.

Objective

Increase the number of acres of working lands protected from conversion to development.

Description

Use voluntary conservation measures such as donated conservation easements, state acquisition, or other long-term use restrictions to protect forests from being converted to development. This effort will utilize geographical information system (GIS) analysis to rank all forest lands in the state based on their contribution to water quality protection, providing terrestrial and aquatic habitat, and forest productivity as well as their relative threat from conversion.

Objective Strategies

- Assist landowners in placing working forest conservation easements on forested properties, particularly for lands ranked as high in forest conservation value.
- Utilize funding from Forest Legacy and Virginia Land Conservation Fund when available to purchase conservation easements or fee simple interest in land.

Alignment to Agency Goals

- Improve the stewardship, health and diversity of the forest resource.
- Conserve the forestland base.

Measures

- Number of acres protected from conversion to development

Measure Class Measure Type Preferred Trend Frequency

Data Source and Calculation

Protected properties will include Department of Forestry (DOF)-held easements, DOF acquisitions, and properties protected through easement or acquisition by others utilizing funding obtained by DOF. Number of acres protected are captured from the deed and other closing documents that are stored at DOF in a fire-proof safe. Scanned copies of the legal documents are also maintained electronically as well as two excel spreadsheets; one for easements and one for fee simple purchases.

Objective

Increase the amount of forestland protected and/or established in Virginia watersheds.

Description

Protect water quality through the establishment of riparian buffers, implementation of erosion and water control measures, afforestation and protection measures, urban tree canopy establishment projects, and maintaining riparian forest buffers along streamside management zones.

Objective Strategies

- DOF Foresters will work with local Soil & Water Conservation Districts (SWCD) to increase the number of riparian plantings.
- Execute the logger BMP program and regional grant program.
- Prepare professional management plans for landowners.
- Provide educational opportunities for landowners through meetings, published literature, and articles.
- Utilize the water quality improvement act funding to increase accomplishments of buffers in rural and urban areas.
- Work collaboratively with partners, agencies and groups to establish new buffers as outlined in the Riparian Forest Buffer Implementation Plan.

Alignment to Agency Goals

- Protect the citizens, their property, and the forest resource from wildfire.
- Improve the stewardship, health and diversity of the forest resource.
- Conserve the forestland base.

Measures

- Number of acres of forest land established and/or protected in Virginia watersheds

Measure Class Measure Type Preferred Trend Frequency

Data Source and Calculation

Data will be collected from Department of Forestry (DOF) Integrated Forest Resource Information System (IFRIS) information and DOF Riparian Buffer Tax Credit data supplied by the Department of Taxation (TAX).

Objective

Be prepared to act in the interest of the citizens of the Commonwealth and its infrastructure during emergency situations by actively planning and training both as an agency and as individuals.

Description

To ensure that resources are used efficiently and programs are managed effectively, and in a manner consistent with applicable state and federal requirements.

Objective Strategies

- Assist communities in developing urban forest emergency response plans and work with VDEM to encourage urban forest planning in local response plans.
- Communicate quarterly with the Office of Commonwealth Preparedness; the Virginia Department of Emergency Management (VDEM), and other Commonwealth Preparedness Working Group agencies.
- Complete two annual exercises, with after -action reviews, to identify areas to implement possible improvements.
- Continue to comply with all Department of Accounts (DOA) and Department of General Services (DGS) Policies and Procedures.
- Continue to comply with the Commonwealth Information Security policies, standards and guidelines as presented and directed by VITA when creating and editing Web pages and applications.
- Provide our employees with focused training that meets national standards in the areas of wildland fire suppression, emergency response, and incident management.
- Strengthen the internal control environment by combining the expertise of the fiscal and procurement functions and provide immediate feedback to the buyer on issues of non-compliance with DOA and DGS regulations as part of the pre-audit function.
- Update the Continuity of Operations (COOP) plan annually.

Alignment to Agency Goals

- Protect the citizens, their property, and the forest resource from wildfire.
- Manage agency resources to effectively and efficiently accomplish the strategic initiatives.

Measures

- Agency Preparedness Assessment Score provided by Virginia Department of Emergency Management (VDEM)

Measure Class Measure Type Preferred Trend Frequency

Data Source and Calculation

The Virginia Department of Emergency Management (VDEM) provides an independent score annually to agencies and this calendar year score will be posted for this measure. The Agency Preparedness Assessment is an all-hazards assessment tool that measures agencies' compliance with requirements and best practices. The assessment has components including Physical Security, Continuity of Operations, Information Security, Vital Records, Fire Safety, Human Resources, Risk Management and Internal Controls, and the National Incident Management System

Objective

Protect and enhance water quality by decreasing sedimentation in streams from forest harvest activities and increasing compliance with Best Management Practices on forest harvest sites

Description

Protect and enhance water quality by decreasing sedimentation in streams from forest harvest activities and increasing compliance with Best Management Practices (BMPs) on forest harvest sites and reducing sedimentation which reaches streams through active forest harvesting and other related activities. Virginia policy makers chose a non-regulatory avenue to ensure water quality would not be negatively impacted through forest harvesting. In 1993, Virginia enacted the Silvicultural Water Quality legislation authorizing the State Forester to inspect logging activities, provide training to loggers, and the enforcement power for non-compliance. Active sedimentation flowing into Virginia streams from logging activities has decreased substantially since the state conscientiously acknowledged its formal voluntary approach to improving its water quality. In 2011, Virginia has achieved almost perfect outcome and this objective seeks to maintain that achievement and continued success in maintaining water quality impacted by logging activities.

Objective Strategies

- Engage water quality specialists to provide more consistency to regional staff for implementation and enforcement of the water quality law.
- Identify BMP implementation rates by individual BMP groups and utilize that information to target specific training programs for the SHARP Logger Program.
- Promote state-wide BMP implementation on timber harvesting operations.
- Utilize comprehensive Integrated Forest Resource Information System (IFRIS) to support the water quality law enforcement program that allows for harvest operation tracking from point of notification to inspections close-out. continue to promote and increase the use of the Water Quality Improvement Act funds to support the Logger BMP Cost-Share Program.
- Utilize Water Quality Penalty funds to support logger training across the Commonwealth.

Alignment to Agency Goals

- Protect, promote, and enhance forested watersheds, non-tidal wetlands and riparian areas.

Measures

- Percentage of harvest sites with sediment not reaching streams

Measure Class Measure Type Preferred Trend Frequency

Data Source and Calculation

The agency uses a team of professional forestry staff to annually evaluate tract information following tree harvests. Samples of total annual logging harvests are selected for the auditing team to measure. The Department of Forestry (DOF) applies the sample data to overall performance in Virginia. The annual reportable result is expressed as a percentage of those tracts that have a reportable active sedimentation problem issue identified on-site. The results are based on a sample size of 240 tracts per year.

- Cost to conduct a forest harvest water quality inspection

Measure Class Preferred Trend Frequency

Data Source and Calculation

Numerator: forest harvest water quality inspection costs (includes salary, wages, and indirect costs) Denominator: number acres of forest harvest inspected (total number of forest harvest acres inspected during the time period)

50104: Tree Restoration and Improvement, Nurseries & State-Owned Forest Lands

Description

This service area consists of Department of Forestry (DOF) tree seedling production nurseries, tree improvement center, State Forests, and State Lands forest management program.

Nurseries:

DOF produces tree seedlings in its own nurseries to provide a source of forest trees to plant future forest crops. DOF operates two nurseries producing approximately 24 million loblolly pine seedlings, other pine species, and a variety of hardwood seedlings for reforestation in Virginia. These seedlings are purchased primarily by the private forest landowner, but the forest industry also purchases DOF seedlings for their needs. The seedlings are selected for Virginia's climate and sites for maximum growth. Species, such as loblolly pine, are a result of genetic improvement work and provide the seed source of current loblolly plantings. Additionally, DOF has made genetic gains in white and shortleaf pine. The nurseries support their operations through the generation of revenues from seedling sales. No tax-supported general fund revenues support the nursery program. The sale of forest tree seedlings must support the operational and capital expenses for the nursery program.

The tree improvement center places its emphasis on genetic improvement of forest nursery seedlings. By locating and improving the better seed sources, DOF continues to provide superior seedlings from the nurseries for private forest landowner reforestation needs. The improvement center also manages seed orchards, a collection of the better tree seed sources, for loblolly, white pine, shortleaf and longleaf pine nursery production. The conservative estimated gain in wood volume and value to the forest landowner is 20% above the best of trees not selected for genetic growth. This means many advantages to the landowner who receives better quality trees, which grow more wood in a faster time period. The advances in genetic tree improvement will greatly help meet the challenges of the smaller Virginia land base available to grow forest crops on economic rotations and tract sizes. DOF has established 150 acres of third generation loblolly pine seed orchards. It will take at least 10 years before all 150 acres of seed orchard will produce seed for nursery production. DOF is establishing improved generation white and shortleaf seed orchards and a native Virginia longleaf pine seed orchard. In addition, the agency is establishing a resistant American Chestnut seed production area on the Matthews State Forest. This will complement the ongoing breeding work at Lesesne State Forest.

State Forests:

DOF manages 22 State Forests encompassing 68,000 acres within the Commonwealth. The purpose of the State Forest system is to provide a working forest based on the core principles of a well-managed forest. DOF's Virginia State Forest System uses the following six core principles of a well-managed forest:

1. Contributes to the conservation of biological diversity of the forest and the landscape in which it resides.
2. Maintains or improves the productive capacity of the forest.
3. Maintains the health and vigor of the forest and its landscape/watershed.
4. Contributes to carbon cycles by implementing management that enhances carbon budgets and cycles.
5. Considers socio-economic benefits.
6. Protects soil productivity and water quality.

State forests are used by DOF to grow trees in a productive manner for a variety of forest products, recreational opportunities, water quality protection, wildlife habitat, non-forest products, and educational opportunities for landowners and students. DOF manages all state forest lands and facilities on the state forests from revenues generated primarily from the sale of forest timber products and permit revenues. These revenues pay salaries, purchase equipment, pay for maintenance and repairs, and all operating expenses. The public uses the State Forests for hunting, fishing, hiking, horseback riding, bird watching, and general outdoor passive uses. The State Forest system is a completely self-generating, non-general funded operation. All forest management activities are carried out only after a complete resource inventory and scientific recommendations have been conducted. While DOF must secure all funding for operations from timber sales, the agency must also open the State Forests to the public who use the forests for many reasons. This creates a delicate balancing act between the needs of the forests and people. The public, academia, forest industry, landowners and others benefit from the State Forest system. These include forest research, demonstration models, stream and riparian demonstration, wildlife research and habitat development, and natural areas. The Cumberland State Forest is the site of the State Forest headquarters.

State Lands:

The State Lands Program also falls into this service area plan. DOF is required by the Code of Virginia to assist other state agencies, with the exception of the Department of Conservation and Recreation and the Department of Game and Inland Fisheries, with the management of their forest lands. DOF staff assesses the condition and quality of the State's forest resources on lands of other state agencies and recommend management practices that fit the agency needs and benefit the forest. Expenses incurred in the State Lands Program are funded via timber sales from the state agency land.

Mission Alignment and Authority

This service area directly supports the agency mission of providing a sustained forest resource for Virginians. The nursery and tree improvement program provide better quality seedlings in the quantities estimated as needed annually by the private forest landowners, industry and organizations for forest regeneration.

The State Forests serve as role models for landowners, students of forestry, and other organizations for the proper way to manage a forest. The self-supporting state forests provide opportunity to demonstrate the values of Virginia's forests. Most of these forests were denuded by clearing and abandoned farming operations in late 1800s and early 1900s. Now, the state forests attest to sustainable nature of managed forests. Currently, the State Forest provides many miles of trails on the State Forests devoted to recreational use by the public. Budgetary constraints will govern expansions to the existing trail system, requiring the State Forests to prioritize where and when expansions occur.

DOF also practices sound management on other state agency forest land to help the agency meet its objectives and provide for healthy forests.

Customers for this Service Area

Anticipated Changes to Customers Base

More private landowners own smaller-sized forest land tracts. Nurseries could experience some decrease in pine production and some increases in hardwood seedling demand. Exact demands on the pine and hardwood species will depend on customer needs, economic markets, and land-use incentives/regulations.

DOF will see an increase in riparian buffer plantings as the program is encouraged and marketed over the next two years. In addition, grant funding increases could cause greater interest for landowners to plant their riparian areas.

Specialty forest product markets could emerge from DOF promotion and marketing by the forest products industry. Landowners could benefit from the marketing campaign

and prompt more interest in reforestation.

State Forest use is expected to increase significantly over the next two years. DOF will develop individual State Forest plans to identify potential new uses for the public, while maintaining traditional uses. A campaign to market the new and traditional uses is currently underway.

The State Lands Program is expected to remain the same over the next two years. No significant increases are projected to occur in the State Lands Program.

Current Customer Base

Pre-Defined Customer Group	User Specified Customer Group	Customers Served Annually	Potential Annual Customers	Projected Trend in # of Customers
Natural Resources and Earth Science	Forest Industry	20	50	Increase
Recreationalist	General Public	4,000	300,000	Increase
Local or Regional Government Authorities	Local governments	100	100	Stable
State Agency(s),	Other State Agencies	20	20	Stable
Farm/Forest Owner	Private forest landowners	4,000	300,000	Increase

Partners for this Service Area

Partner	Description
American Chestnut Foundation	DOF cooperates with the American Chestnut Foundation in the breeding and testing work to reestablish a resistant American Chestnut into Virginia's forests.
Department of Game & Inland Fisheries (DGIF)	DGIF and DOF participate in research and demonstration areas on the state forests and nurseries for the benefit of researchers and landowners.
Forest Industry	DOF cooperates with Mead Westvaco on tree improvement research.
Local Government	DOF pays the local government a percentage of the timber sale to the county in which a timber sale is conducted on the state forest.
North Carolina State University	DOF participates in the tree improvement cooperative work lead by N. C. State University.
Virginia Tech	DOF works with Virginia Tech in the nursery and State Forest programs to benefit research, students and landowners.

Products and Services

Factors Impacting the Products and/or Services

Demand for nursery forest seedlings impact the nursery program. Demand is usually correlated with timber harvests, particularly pine, and special tree-planting incentive programs, such as the riparian buffer planting efforts in all of the Commonwealth's watersheds.

The availability of laborers to carry out the work in the nursery is an important factor impacting products. Two nurseries now carry the entire seedling production for Virginia.

The State Forests are impacted by weather, severe storms, insects, diseases and markets. In addition, growing recreational demands will affect finances and personnel resources for the State Forests. Another factor impacting the State Forest is the amount of allowable acreage or tree volume the State Forest is allowed to remove annually to meet the State Forest Plan and its budget.

Anticipated Changes to the Products and/or Services

DOF anticipates decreased requests for most tree species, especially loblolly pine for reforestation. This decrease is the result of a depressed timber market.

The agency expects the public to use the State Forest more often and in larger numbers. DOF will have to create plans that allow the continuation of forestry operations and greater use of the State Forests.

DOF expects to increase the number of forest management projects on non-DOF owned state lands.

Listing of Products and / or Services

Forest tree seedlings are produced in the nurseries and sold to forest landowners, the forest industry and the general public. Seedlings are used in reforestation, conservation, erosion control, wildlife habitat, and riparian buffer plantings. Many seedlings are the result of genetic improvement work. All seedlings produced are appropriate for Virginia's climate and soils.

State Forest System must pay for their operations through the sale of timber, forest products and user fees. The largest component of their budget is made up from timber sales conducted on the State Forests. Timber is offered by competitive sealed bidding to the highest bidder and sold periodically from stands of mature trees or ready for harvest. These products help the local economy and provide some revenue to the local governments.

DOF provides forest management plans and technical assistance to other state agencies to help them manage their forest land in accordance with the Code of Virginia. DOF must work in cooperation with the Division of Engineering & Buildings to accomplish plans and conduct timber sales.

The State Forest System offers many forest recreation uses, such as hunting, trapping, fishing, mountain bike riding, hiking, horseback riding and bird watching. These uses are available on an annual basis. Permits are available to persons who wish to use the State Forests, such as hunters, trappers, fishermen, bikers, and horseback riders for a fee. As a group, these recreational uses produce a significant percent of the State Forest System's budget.

Research and academic pursuits are benefits of the State Forest and nurseries. DOF partners in research with higher education and participates in research studies with many groups. The information is shared with other researchers, academic institutions, industry, and the public.

Financial Overview

Budget Component	2013 GF	2013 NGF	2014 GF	2014 NGF
Base	0	2,708,538	0	2,708,538
Changes to Base	0	15,075	0	68,845
Total	0	2,723,613	0	2,777,383

Objectives for this Service Area

Objectives for this Service Area

Objective

Improve the efficiency of Department of Forestry (DOF) seedling nursery production.

Description

Efficiency in DOF seedling nursery production will be improved.

Objective Strategies

- Develop and implement a State Nursery business plan.
- Enhance the seedlings application, moving towards a complete nursery management information system.
- Implement the state nursery business plan.

Alignment to Agency Goals

- Improve the stewardship, health and diversity of the forest resource.
- Manage agency resources to effectively and efficiently accomplish the strategic initiatives.

Measures

- Percentage annual increase in nursery cash balance

Measure Class Measure Type Preferred Trend Frequency

Data Source and Calculation

The percentage increase in the cash reserves at the nurseries will be calculated by subtracting the annual expenses from the annual gross revenue and dividing the result (net revenue) into the prior fiscal year-end cash balance in fund 0251 Nurseries Fund. Since the nursery operations are self-sufficient, they must anticipate and be able to fund capital improvements in addition to operational expenditures. Capital needs at the nurseries include costly agricultural equipment, building renovations, irrigation infrastructure repair and replacement as well as intangibles such as software development. Capital expenditures are planned well in advance and paid with cash reserves in the 0251 fund. A cash balance is desirable even without considering capital needs in order to continue operating in the event of a catastrophic weather-related incident that damages the seedling crop or a sudden drop in the demand for the agency's seedlings.

Objective

Manage the nurseries to provide the best quality seedling types demanded by the customers.

Description

Nurseries will be managed to provide the best quality seedling types demanded by the customers at cost.

Objective Strategies

- Implement an annual work plan to assure all seed is selected and managed appropriately and timely.
- Nursery staff shall work closely with research, tree improvement, regions and others to collect, process and store seed.
- Obtain future seedling sales projection and obtain best seed to produce seedlings.
- When possible, grow and sell nursery stock for diminished species restoration.

Alignment to Agency Goals

- Promote forest industry and diversified markets for forest landowners including ecosystem service markets.
- Manage agency resources to effectively and efficiently accomplish the strategic initiatives.

Measures

- Percentage of customers surveyed who rate the quality of Department of Forestry's (DOF) seedlings as satisfactory

Measure Class Measure Type Preferred Trend Frequency

Data Source and Calculation

A customer satisfaction survey will be sent to each seedling purchaser to determine whether they were satisfied with seedlings and service. The number of customers who respond to the survey and indicate that they were satisfied with Department of Forestry (DOF) seedlings purchased from the department will be divided into the total number of customers responding to the survey.

Objective

Manage the State Forest on a sustained basis for research, demonstration, education, and multiple use benefits while staying within the allowable forest harvest levels.

Description

State Forests will be managed on a sustained basis for research, demonstration, education, and multiple use benefits while staying within the allowable forest harvest level of the available crop. This annual harvest level will ensure a sustainable supply of forest products from the State Forests into the future.

Objective Strategies

- Define the best locations for public use on State Forests that complement forest management objectives and timber sales.
- Develop a comprehensive ten year work plan that will meet the goals of the State Forest System goals and objectives.
- Develop a survey to assess the best public uses of State Forest lands and the reasons the public visit the State Forests.

Alignment to Agency Goals

- Conserve the forestland base.
- Promote forest industry and diversified markets for forest landowners including ecosystem service markets.
- Manage agency resources to effectively and efficiently accomplish the strategic initiatives.

Measures

- Percentage of annual allowable harvest harvested

Measure Class Measure Type Preferred Trend Frequency

Data Source and Calculation

The Department of Forestry State Forests are self supporting and are primarily funded through timber sales. Management plans are prepared every ten years to establish a level of harvesting in acres which will result in a perpetual harvest from state forest lands. The value will be determined by evaluating the percentage of acres that could be harvest compared to the acres actually harvested. The actual acres harvested will be divided by the acres that could be harvested per the plan and expressed as a percentage

50105: Financial Assistance for Forest Land Management

Description

This service area consists of providing technical and financial assistance to help improve the livability of cities and communities through managing urban forest resources to promote a healthy ecosystem. The Department of Forestry (DOF) provides leadership to the Commonwealth's urban and city areas to accomplish this goal, liaisons with the U. S. Forest Service and works closely with communities to ensure success. This service area also consists of providing training and financial assistance to Virginia Volunteer Fire Departments (VFDs) who serve a key role as primary cooperators for the agencies wildfire suppression role.

This service area consists of:

Urban & Community Forestry:

- Providing technical assistance to cities, towns and non-profit organizations.
- Making federal grants available to cities, towns, 501-c-3 non-profit organizations, other state agencies and educational institutions.
- Coordinating the Tree City USA Program in cooperation with the National Arbor Day Foundation and the National Association of State Foresters
- Conducting or coordinating urban/community forestry workshops, conferences, seminars, field days, etc., in cooperation with other state agencies and various organizations.
- Providing appropriate training on urban forestry technology, issues and programs to DOF employees.

Assistance to Virginia Volunteer Fire Departments:

- Providing training in wildfire suppression and advanced incident management to VFDs across the Commonwealth.
- Providing federal grants to VFDs to aid them in obtaining specialized wildfire equipment and Personal Protective Equipment (PPE).

Mission Alignment and Authority

The Urban and Community Forestry (U & CF) Program is aligned with DOF's mission in the following ways:

- U & CF encourages the conservation and management of forest land in urbanizing areas.
- U & CF encourages the protection of unique and fragile habitats in urbanizing areas.
- U & CF encourages the enhancement of forested watersheds and protection and enhancement of riparian areas.
- Urban and community forests contribute to economic development in cities and towns.
- Urban and community forests "... protect its atmosphere, lands and water from impairment or destruction (and provide) for the public benefit, enjoyment and general welfare of the people of the Commonwealth..." Article XI, Virginia Constitution.
- Urban and community forests encourages and supports the green infrastructure approach to land conservation.
- Urban and community forests encourages and supports the development of greenway projects in communities.
- Urban and community forests supports and helps to implement environmental leadership training through the Virginia Natural Resources Leadership Institute.
- U & CF encourages professionalism in the practice of urban forestry/arboriculture by supporting and promoting the ISA Certified Arborist Program.
- U & CF encourages development of the urban forestry professiona and practitioners by support of the urban forestry program within Virginia Tech's College of Forest Resources and Environmental Conservation (FREC).
- U & CF provides assistance to "underserved communities" through partnership projects with Virginia Tech's Community Design Assistance Center and Virginia State University.
- The U &CF program promotes and supports forest-based recreation and eco-tourism, as well as community development as a component of Appalachian Forest Recreation (see Virginia Statewide Assessment of Forest Resources document, page 102)

The Forest Resource Protection - Assistance to Rural Volunteer Fire Departments Program is aligned with DOF's mission:

- VFDs are a primary cooperator with the VDOF for the protection of the forest resources of the Commonwealth from wildfire.
- Wildfire prevention and suppression is crucial for protecting and maintaining Virginia's vast forest resources.

Customers for this Service Area

Anticipated Changes to Customers Base

Current Customer Base

Pre-Defined Customer Group	User Specified Customer Group	Customers Served Annually	Potential Annual Customers	Projected Trend in # of Customers
Local or Regional Government Authorities	Local governments	115	146	Increase
Local or Regional Government Authorities	Local Planning Districts	10	20	Increase
Organization	National Non-Governmental Organizations	6	10	Stable
Federal Agency	Other Federal Agencies	4	6	Stable
State Agency(s),	Other State Agencies	3	8	Stable
Higher Education Institutions	State Supported Educational Organizations	19	25	Increase
Volunteer	Volunteer Fire Departments	700	762	Increase

Partners for this Service Area

Partner	Description
Allegheny Energy	Joint efforts to manage trees along utility right of ways.
Alliance for Community Trees	Consultation on National U&CF issues, advocacy, policy
American Forests	Joint efforts to promote the care and management of community trees.
Appalachian Power	Joint efforts to manage trees along utility right of ways.
Community Colleges	Cooperative educational workshops and networking opportunities.
Dominion Power	Joint efforts to manage trees along utility right of ways.
Green Infrastructure Center Inc.	Leadership and technical assistance on green infrastructure projects.
Mid-Atlantic Chapter of International Society of Arboriculture (ISA)	Joint educational and informational efforts aimed at improving and protecting community forests.
Local Governments	Joint educational and informational efforts aimed at improving and protecting community forests. Project development and implementation.
Local Land Trust Organizations	Joint educational and informational efforts aimed at improving and protecting community forests.
Local non-governmental organizations (non-profits)	Joint educational and informational efforts aimed at improving and protecting community forests.
National Arbor Day Foundation	Joint efforts to promote the care and management of community trees.
Regional Planning District Commissions	Joint efforts to identify and quantify the value of forest cover in communities.
Resource Conservation & Development Districts (RC&Ds)	Joint educational and informational efforts aimed at improving and protecting community forests. Project development and implementation.
Scenic Virginia	Development of program information for legislators at state and federal level.
Society of Municipal Arborists	Joint efforts to promote the care and management of community trees.
University of Virginia	Cooperative educational workshops and networking opportunities. Virginia Natural Resources Leadership Institute (VNRLI)
US Forest Service	Cooperative agreements and joint projects to enhance a state and federal program.
US National Park Service	Cooperative agreements and joint projects.
Virginia Cooperative Extension (VCE)	Joint educational and informational efforts aimed at improving and protecting community forests. Project development and implementation.
Virginia Department of Conservation and Recreation (DCR)	Collaboration and cooperation on trails and greenway projects. Joint efforts on greenway and green infrastructure education.
Virginia Department of Transportation (VDOT)	Tree Planting projects.
Virginia Horticultural Foundation	Joint educational effort.
Virginia State University	Cooperative educational workshops, community outreach and networking opportunities.
Virginia Tech	Cooperative educational workshops, research, community outreach and networking opportunities. Project development and implementation. Partnership with Community Design Assistance Center (CDAC).
Virginia Urban Forest Council (Trees Virginia)	Program development, consultation and delivery. Joint educational and informational efforts aimed at improving and protecting community forests. Project development and implementation.

Products and Services

Factors Impacting the Products and/or Services

Funding is the primary factor impacting this service area. The service area represents the act of primarily offering federal grants to communities and volunteer fire departments interested in the protection, development and improvement of their community forests.

Anticipated Changes to the Products and/or Services

DOF recognizes a strong interest from communities and volunteer fire departments in the service area. Historically, DOF receives more requests for federal grant funding than appropriated funds. If funds are increased, DOF anticipates greater interest and more applications from communities for the federal funding.

Listing of Products and / or Services

Provide technical urban/community forestry information and assistance to local governments and community groups who need this information and help to develop and maintain community forests.

Provide assistance to educational institutions through federal grants. DOF works with state universities and colleges to determine where grant funds can be used to help further the development and maintenance of community forests.

DOF assesses and conveys federal grants to qualified segments of the customer base to further the development and maintenance of urban and community forests.

DOF provides conferences, seminars and workshops relating to urban and community forestry to interested parties in urban and community forestry. DOF, to the extent possible within its budget constraints, makes these events accessible to underserved audiences through scholarships.

DOF promotes and administers the Tree City USA Program in Virginia.

DOF develops and funds publications, which provide technical information, contact information and resource assistance.

DOF co-sponsored and helped organize and orchestrate four of the Governor's Conferences on Greenways and Trails in Virginia completed in 1999, 2000, 2001, and 2005. Through its Urban and Community Forestry Program, DOF is continuing its decade long partnership with the Department of Conservation and Recreation (DCR) and the National Park Service to support local greenway and trails efforts. DOF does this through joint projects with Virginia Tech's Community Design Assistance Center to do conceptual planning. DOF also accomplishes this by co-sponsoring workshops and conferences on greenways and trails with DCR and others. Through its Urban and Community Grant Program, DOF also supports local government and/or non-profit organizations with limited funding for staff working on greenways and trail projects.

DOF has funded or supported with staff the following projects: Luray - Hawksbill Greenway(phases 1, 2, 3 & 4), Marion Riverwalk, projects in the Roanoke Valley Greenways system, Blacksburg and Christiansburg connectors to the Huckleberry Trail, Shenandoah River Blueway, Winchester Green Circle, Town of Broadway, Town of Pennington Gap, Wytheville Greenway, Lower Appomattox Greenway/Blueway, Brushy Blue Trail Master Plan, and the Virginia Capitol Trail, the proposed front Royal Greenway, the Dante RV Trail, the Great Eastern Trail, the Tobacco Heritage Trail (in Brunswick and Mecklenburg Counties), and others.

DOF has been instrumental in advancing the green infrastructure concept of land conservation planning to Virginia. DOF hosted the first Virginia training on green infrastructure concepts to a statewide audience in 2005. It has since supported a major green infrastructure planning effort in the New River Valley and the Charlottesville area and has funded several local conferences and workshops to advance this concept. DOF is working with the Planning School at the University of Virginia to see that green infrastructure concepts are introduced to students in this planning program. Through its Urban and Community Grant Program and other sources of federal funds, DOF is supporting green infrastructure work being done by the non-profit Green Infrastructure Center. DOF will continue to use a portion of its Urban and Community Forestry funds to support green infrastructure initiatives to the extent possible with this limited funding.

The Forestry Workgroup and the Chesapeake Executive Council of the Chesapeake Bay Program has recognized the retention and expansion of urban tree canopy (UTC) as a strategy in its "Expanded Riparian Forest Buffer Goals" Directive 03-01 states that "By 2010, (the Chesapeake Bay Program through DOF) will work with at least five (5) local jurisdictions and communities....to complete an assessment of urban forests, adopt a local goal to increase urban tree canopy cover and encourage measures to attain the established goals in order to enhance and extend forest buffer functions in urban areas". DOF, through its Urban and Community Forestry Program, is supporting urban forest assessments in 15 communities within the Chesapeake Bay watershed and will continue to support these efforts through very limited funding from the Chesapeake Bay Program, state Water Quality Improvement Funds and other grant funds. Some communities have already established UTC goals and DOF will monitor communities doing assessments and encourage goal setting measures by them in order that Virginia meets the UTC targets set forth within Directive 03-01 of the five (5) state Chesapeake Bay Agreement.

DOF is utilizing a portion of the Water Quality Improvement Act (WQIA) funds distributed by DCR to support on-the-ground urban and community forestry activity to improve community water quality. These funds are used to support grants to local governments or organizations to establish riparian areas, restore wetlands, install bio-retention projects (i.e. rain gardens), etc. The Urban and Community Forestry program will continue to support this activity as long as WQIA funds are available.

Through its partnership with Virginia Tech's Community Design Assistance Center (CDAC), DOF provides conceptual planning in communities for streetscapes, parks, green space, greenways/trails, and other open space. These conceptual plans can be leveraged into funding from various state and federal agencies.

Through its partnership with the University of Virginia's Institute for Environmental Negotiation (IEN), DOF helps deliver extensive leadership training for natural resource professionals through the Virginia Natural Resources leadership Institute.

Through its partnership with the Mid-Atlantic Chapter of the International Society of Arboriculture (MAC-ISA), DOF helps individuals achieve and maintain professional ISA Certified Arborist status through hosting exam preparation training and organizing training events (workshops, conferences, etc.) that offer continuing education units (CEUs).

DOF provides urban tree canopy assessments (UTCs) to communities interested in developing public policy to improve water quality and manage storm water as part of the five-state Chesapeake Bay Agreement. Through FY 2011, DOF has assisted 27 communities in assessing urban tree canopy. DOF is supported in this effort with funding from the United States Forest Service (USFS) Chesapeake Bay Program.

Financial Overview

Budget Component	2013 GF	2013 NGF	2014 GF	2014 NGF
Base	0	675,000	0	675,000
Changes to Base	0	0	0	0
Total	0	675,000	0	675,000

Objectives for this Service Area

Objectives for this Service Area

Objective

Increase urban forest management in Virginia communities.

Description

Urban and community forest management activities in Virginia communities will be increased. Forests play an important role in the environment and economy of urban communities. DOF will work with communities to help them understand the importance of forests and encourage them to adopt a variety of activities to protect and enhance healthy urban community forests.

Objective Strategies

- Categorize Virginia communities into the various program levels using United States Department of Agriculture (USDA) Forest Service guidelines.
- Establish comprehensive street tree inventory for major municipalities in Virginia (through Forest Health Grant).
- Partner with Virginia State University to increase involvement in UC&F programs by traditionally underserved citizens. Recruit greater underserved population participation in urban forestry related opportunities, including the Virginia Urban Forest Council and the Virginia Natural Resources Leadership Institute.
- Promote the benefits of urban and community forestry to community officials through workshops, conferences, publications, and other media.
- Target U&CF grants and technical assistance to communities interested in upgrading their community tree program to the next level.
- Through grant funding, professional development activities and professional certification programs of the International Society of Arboriculture (ISA), continue to promote development of the urban forestry profession in Virginia.
- Within constraints of available funds and staffing levels, implement activities outlined in the Virginia Department of Forestry Urban & Community Forestry program

area strategic plan.

Alignment to Agency Goals

- Protect, promote, and enhance forested watersheds, non-tidal wetlands and riparian areas.
- Improve the stewardship, health and diversity of the forest resource.
- Conserve the forestland base.

Measures

- Number of communities assisted with forest and/or tree resource management

Measure Class Measure Type Preferred Trend Frequency

Data Source and Calculation

The Department of Forestry (DOF) will count the number of times DOF assists communities, including grants, technical assists, Tree City USA, and active urban forestry plans.

Objective

Provide available financial resources to rural volunteer fire departments for training and the acquisition of small equipment and wild land personal protective equipment.

Description

Provide available financial resources to rural volunteer fire departments for training and the acquisition of small equipment and wild land personal protective equipment.

Objective Strategies

- 20% of the Commonwealth's rural volunteer fire departments will receive DOF pass-through financial assistance on an annual basis based on needs and current wildfire response capabilities.
- Increase the use of available Federal Excess property to volunteer fire departments within identified high fire risk areas.
- Maintain and update annually the contact for each volunteer fire department within the county to the regional data base, and to maintain an effective working relationship.
- Promote continued development and expansion of both state and local wildfire suppression capacities. Provide localized wildland fire training in each VDOF region and at least one statewide training academy to improve the efficiency of wildland fire response.

Alignment to Agency Goals

- Protect the citizens, their property, and the forest resource from wildfire.
- Manage agency resources to effectively and efficiently accomplish the strategic initiatives.

Measures

- Percentage of eligible rural volunteer fire departments receiving available state and federal financial assistance

Measure Class Measure Type Preferred Trend Frequency

Data Source and Calculation

The Department of Forestry (DOF) will count the number of volunteer fire departments who received funds annually compared to the number of eligible rural volunteer fire departments as listed by Department of Fire Programs.