



FORESTLAND CONSERVATION REVIEW

December 2013



CONTENTS...

From the Director – 2

Trees are the Answer: Building a Case for Forests – 3

Just What are Conservation Easements? – 5

Preservation of the Coleman Family Farm Legacy – 6

Private Sector Investments in Abandoned Mine Land
Restoration – 9

Wood Energy - What is Old is New Again – 10

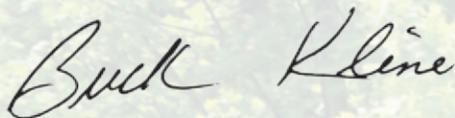
InForest Application – 12

FROM THE DIRECTOR

A lot of “conservation ground” has been covered in the past months. A quick snapshot of the Forestland Conservation Division (FLCD) initiatives include:

- ▲ We have seen 10 recorded conservation easements with the traditional year-end flurry of additional donated easements in progress.
- ▲ Charlie Becker was elected Chairman of the Southern Group of State Foresters Services, Utilization and Marketing Task Force.
- ▲ Becker is also very active at the state, regional and national level with biomass, certification and marketing initiatives.
- ▲ The Forests to Faucets grant in the Rivanna River Basin has been successfully concluded. Conversations are now occurring in the community to consider the merits of such a program going operational independent of grant funding.
- ▲ Several new grant-funded initiatives are underway. Including these new initiatives, the FLCD has brought nearly \$6 million to the conservation table since the Division was created in 2008.

The articles that follow provide more detail and information of the Division’s work. As always, we welcome your feedback and ideas to improve on the updates and information provided in the newsletter.



Buck Kline, Director
Forestland Conservation Division

TREES ARE THE ANSWER: BUILDING A CASE FOR FORESTS

By Greg Evans



The website for the Society of American Foresters opens with the pronouncement “Trees Are the Answer.” It then goes on to ask “But what is the question?” and provides these:

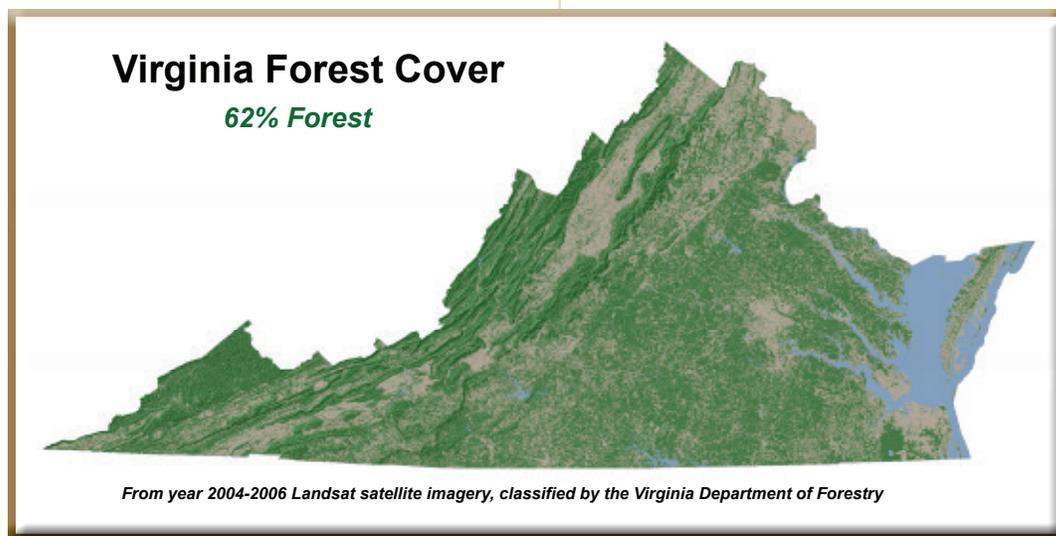
- ▲ What protects our rivers and streams and provides us with clean water?
- ▲ What provides us with the goods that we depend on every day?
- ▲ What helps you save on your heating and cooling?
- ▲ What helps us address climate change?
- ▲ What helps us clean the air?
- ▲ What do we have as much of now as we did 100 years ago?
- ▲ What sparks our imagination, and lifts our spirits?
- ▲ What do we, and a wide variety of other species, depend on for our well-being?
- ▲ What, along with the wind, sun and waves, provides us with clean, sustainable energy?
- ▲ What renewable resource plays a vital part in our nation’s economy?

In a similar vein, Virginia’s State Water Commission was recently presented with a briefing on Eastern Virginia’s groundwater situation and wrestled with, among other issues, some very expensive reclamation options and recharge issues. The role of forests was not mentioned. Localities throughout the Commonwealth, and particularly in the Chesapeake Bay watershed, are struggling to manage their Total Maximum Daily Load (TMDL) requirements. The Phase II Watershed Implementation Plan (WIP) guidance provided to localities to help them develop their management plans notes that forests are the best land-use cover for water quality protection. The EPA TMDL model does not offer credit for existing tree cover; it provides only credit for new tree plantings. There are numerous federal and state laws enacted to protect, improve, restore and conserve water quality, air quality, wetlands, habitat and

endangered and threatened species. Upland forests are often a common denominator for achieving all of these objectives. Conservation of upland forests, with only a few very restricted exceptions, is not addressed in any of these laws. “Trees are the Answer.”

Trees and the forest they reside in are indeed the answer, yet Virginia continues to lose 16,000 acres of forest on average each year. How big an area is 16,000 acres? It is about twice the size of the City of Charlottesville where the Department of Forestry is headquartered. Picture that – every year Virginia has been losing an amount of forestland, if it was all lumped together, that is almost twice as big as the City of Charlottesville, and it has been losing forestland at that rate for more than 10 years. “Trees are the Answer.”

Something is wrong with this equation. “Trees are the Answer” to so many conservation questions and challenges,



*continued on
page 4...*

TREES ARE THE ANSWER: BUILDING A CASE FOR FORESTS

Continued



yet the ecologic and economic value, and role of forests is often discounted or considered secondary to other priorities. The Department of Forestry is working aggressively to change that. There is no regulatory regime pertaining to upland forest conservation as there is for wetlands, and the Department of Forestry does not advocate such an approach. It is, however, collaborating with other state agencies, localities, federal installations, industry, conservation organizations and other stakeholders to alter the equation by raising awareness of and appreciation for the value of forests.

The Department's goal is to institutionalize forest conservation as a primary consideration in land-use planning and development decisions. To achieve this, it has worked closely with the Department of Environmental Quality (DEQ) to develop technical guidelines for state agency-proposed infrastructure projects that focus on the ecologic and economic benefits of forestland that could be lost as a result of a project's construction. These guidelines are now part of DEQ's published checklist for proposed projects. VDOF has also greatly expanded its technical analysis roles in the project environmental impact review processes used by VDOT, DEQ and the State Corporation Commission. Since the beginning of 2013, VDOF has reviewed more than 100 project proposals and now often provides detailed assessments and recommendations aimed at avoiding, restoring and replacing forest loss resulting from the planned design of proposed municipal infrastructure projects. A review of final permitting documents and decisions made by consulting engineers following discussion with VDOF is showing that these efforts are beginning to pay off in amended project footprint designs that are mitigating forest loss.

VDOF has coupled its more robust assessment and analysis efforts with broader outreach to private corporations and federal and state agencies that sponsor or provide funding for infrastructure development projects. The purpose of this outreach is to convey the message that "Trees are the Answer;" to explain VDOF forest conservation objectives, and initiate a dialogue aimed at identifying areas of possible collaboration and parallel interests that could lead to increased forest conservation.

What's next? Building on these outreach efforts, VDOF has begun working with VDOT, DGIF, DCR Natural Heritage, state and regional conservation groups, and other organizations to bundle mission priorities that complement an overall objective of forestland conservation and determine how and where these multiple benefits can enhance the value of forest as a land use and in so doing, create greater incentives for forestland conservation. Why? It is because "**Trees are the Answer.**"

JUST WHAT ARE CONSERVATION EASEMENTS?

By Larry Mikkelson



Conservation easements, a new term to many agency personnel only 10 years ago, are now a part of the lingo of many of our employees as they go about their daily work routines providing management advice and services to forest landowners in the areas they serve. Easements have become part of discussions with these landowners and are a new tool in the toolbox – a way for landowners to conserve (not preserve) their property as productive forestland for the future.

Most everyone now knows that a conservation easement is a legal instrument (a deed) that amends the rights of the present landowner, and all future owners, of a particular property for all time. It is recorded in the courthouse just as with a property transfer, and is attached to the property as a negative servitude in perpetuity. Sounds ominous, doesn't it? All that means is that an outside party (the VDOF) has the right to restrict the land and enforce the easement; the landowner has donated that right to the agency or, in the case of the Forest Legacy Program, has been partially paid for the easement.

This type of easement is different than a power line easement that gives a power company the right to install a new line across a property. That type of easement also affects the property in perpetuity, but is called a positive easement. It may be voluntary, like when I signed an easement so the power company could cross my property to bring power to my house when it was constructed. Or, it may be involuntary as in cases of eminent domain where the power company, in the name of improving public utilities, "takes" one of my rights as owner and crosses the property with a new transmission line.

Now, back to conservation easements . . . typical rights given up in a conservation easement are development rights. Depending on the zoning in a particular county and at a particular location, the owner may "own" the right to sell off the property in five-acre parcels after following the requirements of the county zoning code (frontage, roads, utilities, etc). An easement restricts those rights by reducing the number of divisions allowed, or eliminating them.

Typical VDOF easements either restrict all development rights, or more commonly, restrict the allowed number of divisions and the number and size of residential structures allowed on those divided parcels. During easement negotiations, if a landowner desires to retain some

division rights, VDOF has a table of acceptable acreage and structures, but generally allows divisions of 125 acres or greater. This is because on a 125-acre parcel, if the easement restrictions also contain structure placement restrictions (ie. near the edge of the parcel), then a manageable block of productive forestland will remain in perpetuity.

If you work in one of the 41 counties that now have VDOF-recorded conservation easements, on a rainy day, take out your copy of an easement and read through it. You may be interested to see both the detail and the volume of the language that was negotiated. After reading, you will have a better understanding of the restrictions that now affect the property. While VDOF conservation specialists will have provided field personnel with a summary of easement restrictions for the property, the detail of what is in the easement may be an interesting read, and worthy of your time.



PRESERVATION OF THE COLEMAN FAMILY FARM LEGACY

By Mike Santucci



“There’s more than meets the eye in a conservation easement.”

Conservation easements are often viewed as a covenant that protects the land and its associated natural functions and values, productive potential and all of the uses associated with the rural landscape. To the donors, they are often something more. Not only does the easement protect land they love, but also the family legacy and values tied to land, and the context by which previous generations are remembered.

The Janice Coleman easement epitomizes these intangible ideals that are not often spoken about, but are as much a driver for the donor as the conservation values recited in the body of the deed. The Coleman Family Farm is well kept, but non-descript, at the intersection of two thoroughfares in Campbell County. But as can be the case with many easements, appearances can be deceiving, and the story of how the family farm came to be, and how it was sustained and ultimately protected, is intriguing. And as it was with Janice, it is often these stories that rise to the surface as the most important thing to protect with a conservation easement.

The account of the Coleman Family Farm began in Colonial days, when the brothers Watkins ventured up the James River six generations ago, engaged in a search for suitable land to homestead in the hopes of establishing a successful plantation. Suitable land they found, in an expanse of gently rolling acreage just east of present-day Rustburg. As the Watkins family grew and flourished through the generations, so did the plantation. With this ambitious beginning, the seeds of a legacy of hard work, discipline, dogged persistence and appreciation of the land were sown into the Coleman family some two centuries ago.

Success was sustained as subsequent generation’s children grew into adulthood, married and had children of their own. Each child who promised to stay on the Watkins farm was granted enough land for a modest home and garden. This arrangement guaranteed a dependable work force and created a form of “successional” planning for the farm, instilling an intergenerational tie to the land as all worked together on the main plantation and shared the income. However, this act of generosity also unknowingly set the wheels of parcelization of the original farm in motion.

It was during this period of growth that the Coleman name was introduced into the Watkins family line, when Janice’s paternal grandmother, Mary Watkins, married. The young couple was granted 66 acres of land on the plantation; the very same land that is now under conservation easement with the VDOF.

Self-taught in horticulture, a knowledge which she applied generously to the farm, Mary Watkins Coleman’s affinity for her family’s heritage and the natural world had a profound impact on a young Janice Coleman through the oral history she heard from her father’s oldest sister. Before

her marriage, Mary Watkins understood the value of education beyond the farm, figuring out a way to obtain an advanced education during a time when such opportunities were not availed to women, especially those from a rural background. These memories ultimately inspired Janice to pursue a career in education and honor the Watkins and Coleman legacies. It is these values that would eventually weave their way into the very fabric of Janice’s being, and become a philanthropic catalyst, which included donating the conservation easement.

Unless careful planning has taken place, events like the death of a matriarch or patriarch often initiate the breaking up of the family land. Without the land as context, the stories and the emotional, physical and financial investment of many generations becomes a distant, splintered memory that fades with the passage of time. Such was the case with the early death, during childbirth, of Mary Watkins Coleman; the tradition of children staying and helping on the farm began to take on lesser importance. After the death of Janice’s grandfather, the threat of parcelization of the farm became a reality. Upon the counsel of a family attorney, the farm was to be sold and the land or proceeds divided among the six adult Coleman children, including her father, or their surviving spouses. A 66-acre working farm and forest could have become six house lots.

But Janice’s father was resolute in sustaining what his forebears had started and worked hard to retain. He saw buying

*continued on
page 7...*

PRESERVATION OF THE COLEMAN FAMILY FARM LEGACY

Continued



out his siblings as the solution to keep the farm and legacy intact. He went into significant debt to do so, and took a full-time job off the farm, thereby relegating working the land to his weekends, evenings and vacation time. The sweat equity, supplemented with ample amounts of blood and tears, of Janice's parents and their two children, including Janice, kept the farm alive, and they eventually paid off the debt.

As the years went on, Janice's parents could foresee the future implications inherent in the parcelization and changing ownership of rural lands. They realized that this remnant of the original Watkins plantation was threatened.

This created tension with what they felt was an obligation to follow the pattern of previous generations to allot a piece of property to any of the next generation who would build a home and live on their portion. Janice's parents intended to divide the farm into equal parts for her brother and her to have their homes. Being childless, Janice's 33 acres would remain intact for the



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page 8...*

PRESERVATION OF THE COLEMAN FAMILY FARM LEGACY

Continued



foreseeable future, but her brother's half could potentially be further divided into building lots for his children.

Janice's brother, and subsequently each of his children, declined the offer of their building lot on the farm for their first homes. Having become happily established in homes outside of the farm, the chain of obligatory parcelization was broken. Given this second chance at keeping the property intact and working, her parents became aware that they must be more proactive in planning a positive future for the farm to ensure its treasured legacy. The family knew that Janice had developed an inexorable appreciation for the farm and all things natural; hence, she became the solution.

An innovative will and estate plan was designed to keep the Coleman farm whole and provide that Janice's brother would enjoy the personal and financial benefits of the farm during his lifetime, without any of the financial responsibility for upkeep and management. This restricted ownership and responsibility for ensuring that the property be kept in the condition which her parents would want was transferred to Janice. Upon her brother's death, unrestricted ownership with full responsibility of supporting the Coleman family legacy passed to Janice.

Enter Wendy Shadwell. Wendy and Janice became roommates, and ultimately best friends, at Mary Washington College, now University, in Fredericksburg, Va., in 1960. Being from New York City, instead of trekking home, Wendy stayed at the Coleman farm during short school breaks. The fact that the rural Virginia lifestyle fascinated Wendy helped Janice appreciate the farm from a different perspective. Upon Janice's father's death in 1994, Wendy prophetically told her friend, Janice, that she had to be the one to protect the Coleman legacy: a legacy of a family farm, hard work, of the importance of education and a love of the natural world. Wendy promised her help.

And help she did! Wendy's childhood and college days were "comfortable" and she respected how difficult it had been for Janice to afford college. Coupled with her appreciation for the hard work of the rural life, Wendy felt compelled to honor the dedication of farmers like Janice's parents by initiating the establishment of The Coleman Family Farm Scholarship at their alma mater for women from active farming families.

Having secured Mary Watkins Coleman's legacy of educational opportunity, Wendy and Janice next set their sights on the means to secure a satisfactory and permanent future for the farm, a quest that took more than a decade. This required a combination of addressing the perpetual protection of the property, as well as the current land use.

VDOF entered the picture in regards to the former challenge as the only easement-holding organization willing to assist Janice in preserving her family's legacy by protecting the property in perpetuity. The easement was recorded in 2010,

prohibiting any future divisions of, and limiting development on the property. The 66-acre vestige of the original Watkins plantation is now perpetually available for farm and forest.

Forever true to her family's legacy, and not content with stopping at the easement, Janice has arranged in her estate plan to bequeath the eased property to the University of Mary Washington, which will sell the property, to support The Coleman Family Farm Scholarship. She has made arrangements for the current tenant farmer, who has been tending the farm for many years, to have first right of purchase."

"Janice's feelings about her efforts are evident: "Designing this inviolable and self-perpetuating protection while honoring all that my family has stood for is the significant accomplishment of my recent adult life. It was a challenging experience with the happy ending of knowing that no matter how many transitions occur for the ownership of our farm, the conservation legacy will remain intact. This plan encompasses my esteem for the efforts of many past and present family members who have cared for the property, as well as for my goals of conservation of natural resources and protection of wildlife habitat. Even when the owner's name changes someday in the future, this protection fulfills my family's multigenerational legacy."

PRIVATE SECTOR INVESTMENTS IN ABANDONED MINE LAND RESTORATION

By Buck Kline



There are an estimated 1.1 million acres of orphaned mined land sites that were mined pre-SMCRA (1977 Surface Mining Control and Reclamation Act). These Southern Appalachian abandoned mine lands (AML), which exist in a wide range of degradation, may represent an opportunity for private investment in reforestation and the creation of a rejuvenated forest-based economy. This potential investment may provide far-reaching social, economic and financial returns. Identifying barriers and opportunities in attracting private-sector investment in abandoned mine land is the purpose of a new U.S. Forest Service grant awarded to the Virginia Department of Forestry.

A recent meeting of partners in Blacksburg, Va., kicked off the effort. Partners include Virginia Tech; Working Lands Investment Partners; Virginia Department of Mines; Minerals and Energy; U.S. Department of Interior Office of Surface Mining; West Virginia Division of Forestry, and the Virginia Department of Forestry.

Three principle considerations required for private investment include: 1) sufficient site quality, 2) positive cash flow in the early years of the investment period, and 3) quantifiable and manageable risks leading to an achievable required rate of return.

The first consideration is impacted positively with research efforts by Dr. Carl Zipper and members of the Appalachian Regional Reforestation Initiative (ARRI). Specifically, what is being called the General Legacy Surface Mining Reforestation Prescription approach informs the process of developing a successful reclamation project. Basically, the prescription includes the elements of Plan, Prepare, Plant and Protect. The experience with this prescription approach will be helpful in ranking and targeting specific properties for reforestation investment. This aspect of the proposed work will be accomplished in close coordination with the ARRI experts and Virginia Polytechnic Institute (VT).

The second consideration requiring analysis in the context of private investment is consideration of cash generation in the early years of the project. These considerations involve the potential for revenue associated with the emerging ecosystem service markets. These include market potential for improved water quality driven by the emerging water quality regulations, water quantity, stream restoration and carbon sequestration.

The third principle consideration is the quantification of risk, including project risks, property risks, regulatory risk, and financial risk – both portfolio specific and broader market. These categories of risk will be detailed and quantified. This risk analysis is a key consideration for the private capital investment decision, and importantly, also to determine the required rate of return. This “hurdle rate” will be critical to the positive investment decision. Understanding the management of these risks is KEY to the potential for a successful public private partnership in the execution of these projects.

the desired scale required to address the problem of AML reforestation / restoration. Private capital investment may achieve the desired result – thousands of acres reforested in Southern Appalachia. A key part of the grant will be to identify barriers to attract private investment and identify potential solutions to those barriers.



Public and philanthropic funding is insufficient to achieve

WOOD ENERGY - WHAT IS OLD IS NEW AGAIN

By Charlie Becker



Before the discovery of coal, oil and other fossil fuels, much of our energy needs came from forests. This included wood for heating our homes and cooking our meals to fueling iron furnaces and large boilers that provided steam for running factories and trains. Tens of thousands of acres of forest were cut annually in Virginia to supply the wood for these needs. The harvesting, processing and transporting of wood supplied significant local jobs in many rural areas. Over the last 100+ years, fossil fuels have replaced most of the wood used to heat and power our lives. The abundant, inexpensive new fuels led to major expansions in manufacturing, transportation and electrification. Wood fuels were mostly delegated to rural areas or industries and many forest product manufacturers, where it was still cheap and available.

The new fuels meant that less wood was needed as well as less cropland for feed, as draft animals were replaced with machines. This helped influence the large increase in forestlands in Virginia over the last century.

Since the 1960s, there has been increasing concern on both the environmental impacts and sources of our fossil fuels. Although several events over the years, such as the Arab Oil Embargo, Exxon Valdez oil spill, Chernobyl Nuclear Plant meltdown, instability in the Middle East, earthquake damaged Fukushima Daiichi Nuclear plant, climate change projections and others, have led to pushes for more local and renewable fuels, the efforts have usually been short lived. In many cases, once the crisis is history and energy prices are lowered, the calls for change diminish.

In the past few years, several things have changed that are increasing the momentum towards more renewable and locally produced energy. Energy prices for most fossil fuels have been increasing while alternative energy costs have been decreasing. Large disasters, global warming, climate change and security concerns, along with new technologies are much more publicized today. The push for change is also more global.

This is leading to opportunities to increase the production of local, renewable energy and provide new markets for Virginia's forest landowners. These include: five biomass power plants providing electricity to the public by the end of 2013; recent biomass boiler upgrades at MWV (MeadWestvaco), Longwood University, Ferrum College and other facilities; eight wood pellet plants, with more planned, that produce fuel for residential and industrial use both domestically and for export, and developing liquid biofuel production.

To further expand opportunities to produce energy more locally while reducing energy costs, creating jobs and providing markets for Virginia wood, the Department of Forestry has received a grant to develop a community wood energy program. The goal of the project is to expand wood energy production/use in Virginia at a community scale with an emphasis on thermal or combined heat and power (CHP) projects. The program will be based on the successful Fuel for Schools efforts that have occurred around the United



WOOD ENERGY - WHAT IS OLD IS NEW AGAIN

Continued



States and will build on local biomass energy activities like the “Community Scale Renewable Energy Program” at Matthews State Forest.

We have entered into an agreement with The Center for Natural Capital to manage the program. Other partners will include VA Tech, Longwood University and other educational institutions, forestry and industry associations, energy contractors and consultants, municipalities and other stakeholders. To accomplish our goal, we will be developing a statewide database of energy users that will be screened and ranked to identify projects with the best potential for wood energy and then provide technical and other assistance to make it successful. Educational programs, reference materials, success stories and demos are also planned to increase awareness of new wood energy technology, share the benefits of community wood energy and identify additional project opportunities. As part of the project, local fuel sources will be identified to ensure sustainable supplies of fuel, while creating new markets and jobs.

Although there are several concerns – sustainability of resource, pollution, etc. – the resurgence of wood energy will offer several opportunities for Virginia forest landowners and other citizens if done correctly and in the right place. The inefficient, smoke-belching stoves and boilers are a thing of the past. Most new equipment is computer monitored and controlled, and must meet strict emissions standards. Many systems in the United States and around the world operate in populated areas with little concern. So keep your eyes open; it may not be long before you see totally, locally produced energy, with the growing, harvesting, processing, trucking and utilization of wood all happening in your area. If you would like to learn more or assist with this program in any way, contact Charlie Becker at charlie.becker@dof.virginia.gov.



INFOREST APPLICATION

By Buck Kline



The free software program called InFOREST was launched in April 2012. It is available to anyone with a computer and Internet access who is interested in learning about the effects of how land-use changes impact various ecosystem services. Forest ecosystem services are the services and benefits that forests provide us. Examples include water quality, water supply, sediment and nutrient load reduction, air quality, recreation and pollination. Until now, this kind of information has been available primarily to individuals who are savvy enough to run models. InFOREST is a user-friendly software tool that enables many users to access and run the various models that estimate ecosystem services.

The InFOREST application includes a map-making utility for creating and printing maps. Users also have the ability to view various data layers, such as watersheds, conserved lands, State Forests, aerial photography and topography.

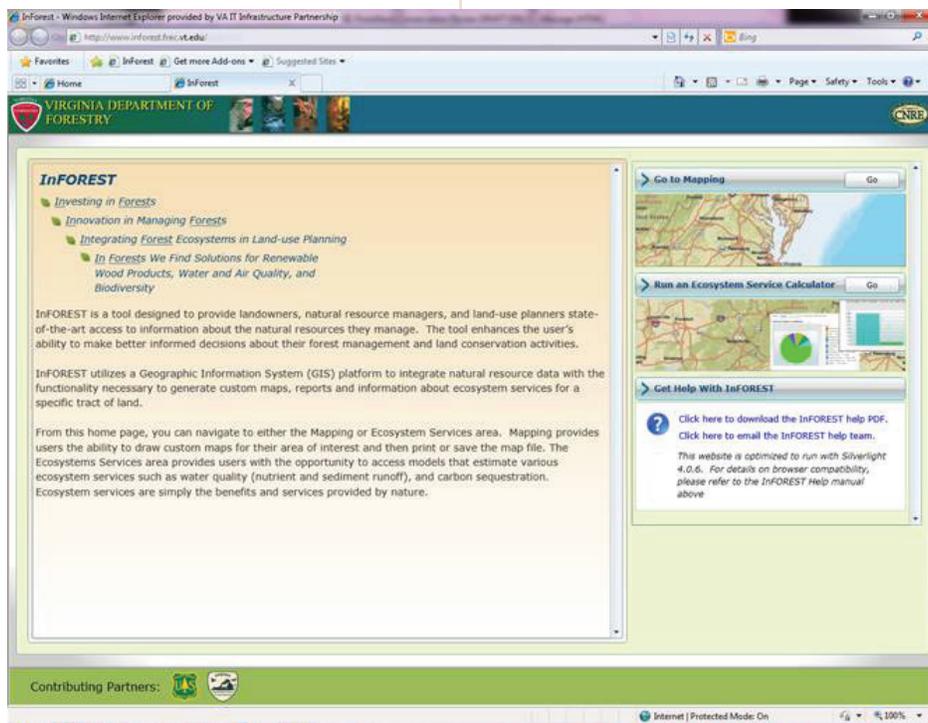
The program was developed by the Virginia Department of Forestry (DOF) in partnership with Virginia Tech and the Department of Game and Inland Fisheries with funding from Dominion Virginia Power and a U.S. Forest Service grant.

The specific forest ecosystem services that can be measured include carbon sequestration, sediment loads and nitrogen and phosphorus loads. Virginia Tech was recently contracted to add additional ecosystem services to the InFOREST suite of calculators. The new additions will be air quality and biodiversity. Users will be able to calculate various air pollutants that forests remove. The biodiversity tool will measure how species richness is impacted by land cover changes, such as forest loss. A tool to perform open land analyses to identify areas of steep marginal lands and riparian areas for potential tree planting projects will also be added.

The Forestland Conservation Division has been using the InFOREST application in the Environmental Impact Review (EIR) process. This enables VDOF to do a better job of identifying important attributes of forestland that is to be converted to more intensive

land uses. This is important in making better informed decisions regarding the environmental consequences of forest conversion. It also strengthens the case for requested voluntary mitigation of lost forestland. In the Department of Environmental Quality's Environmental Impact Review manual (Appendix 5A), InFOREST is also cited as a tool to provide information necessary to make informed decisions regarding forest loss.

To learn more about InFOREST or to use the program, go to <http://inforest.frec.vt.edu/>



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