

# DELAWARE Forest Service 2012 ANNUAL REPORT



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DEPARTMENT OF AGRICULTURE

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July 29, 2012

W. Edwin Kee, Jr., Secretary  
Delaware Department of Agriculture  
2320 South DuPont Highway  
Dover, DE 19901

Dear Secretary Kee:

As you know, forests provide all Delawareans with invaluable natural benefits: they clean the water we drink, filter the air we breathe, moderate our local climate, provide habitat for countless species of animals and other plants, and help support the regional forest products industry. The Delaware Forest Service is committed to protecting this valuable natural asset as well as providing timely and professional forestry services whenever needed. The staff and I greatly appreciate your support for, and interest in, our core forestry programs.

The attached Annual Report outlines many of our program accomplishments for Fiscal Year 2012. We are focused on our mission: *to conserve, protect, and enhance Delaware's forests through education, management, and professional assistance*. Our guide is the 2010 *Delaware Statewide Forest Strategy* that contains 19 specific strategies and 78 corresponding performance goals/measures of success. In two years we have fully met or exceeded 30 of these performance measures. And we will continue to concentrate our efforts and resources in attaining the remaining goals in this strategic forest action plan.

Our success in forestry would not be possible without your continued support and the generous support we receive from the Markell Administration, the General Assembly, and the U.S. Forest Service. Healthy, productive forests benefit everyone. We are dedicated to protecting this precious natural resource. Thank you for helping us to achieve success in our diverse forestry programs.

Sincerely,

Michael A. Valenti  
Forestry Administrator

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**George Torbert, III**  
*Greenwood*

**Michael A. Valenti**  
*State Forester*



# Arbor Day



# Day



*Above, Governor Jack A. Markell congratulates Nathan Morris of Christ the Teacher School in Newark for his winning entry in the annual Arbor Day School Poster Contest.*



*Delaware State University became the first university in Delaware to be honored as a Tree Campus USA and the only historically black college or university (HBCU) currently certified by the National Arbor Day Foundation.*



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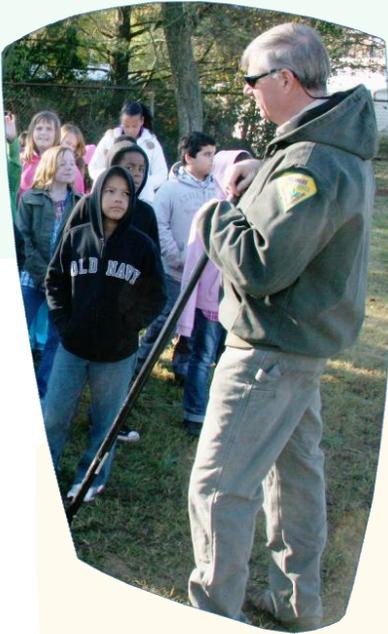
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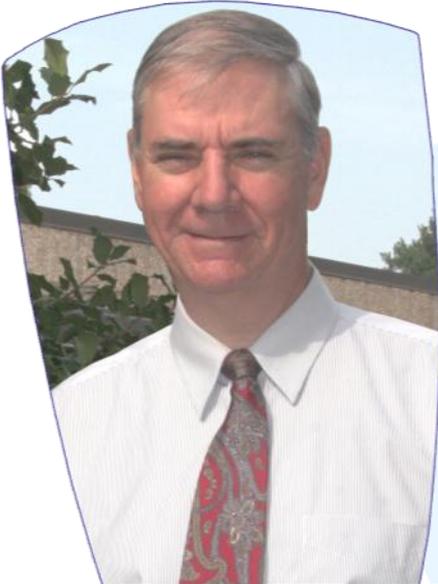
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# Executive Summary



**Michael A. Valenti**  
Delaware State Forester

**C**onservation of our rural and urban forests should be of utmost concern to all Delawareans because of the numerous natural benefits that trees provide. The Delaware Forest Service faces many challenges as we endeavor to protect forestlands. These challenges can be divided into three broad categories: 1) poor management of forest resources, 2) threats to the long-term health of our forests, and 3) the lack of public awareness of the importance of Delaware's forests and the professional forestry services offered by the Delaware Forest Service.

In taking on these challenges, the Delaware Forest Service administers a number of programs in three main categories: conservation, protection, and education.

## Forest Conservation Program

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**Urban and Community Forestry.** Delaware Forest Service staff, through the Urban and Community Forestry Program, provide technical assistance to cities, towns, communities, developers, and local governments to help develop community forest management plans and street tree inventories. Foresters also review proposed developments to conserve and protect urban forest resources. Additionally, annual community forestry grants are offered to various organizations for tree planting and tree management projects on publicly owned lands. In FY12, the Delaware Forest Service awarded 27 community forestry grants totaling \$189,982 for various urban and community forestry projects throughout Delaware.

**Landowner Assistance.** Our professional foresters help landowners improve the quality of their forested lands through a variety of services. This technical assistance encompasses a wide range of forest management activities including reforestation, timber stand improvement, timber harvesting, and forest management plan development. In FY12, the Delaware Forest Service helped private landowners reforest 370 acres, developed 53 forest stewardship plans on over 4,759 acres, and assisted eight landowners with silvicultural practices on 603 acres.

## Forest Protection Program

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**Forest Health.** The Delaware Forest Service strives to maintain and improve the health of Delaware's forests through forest pest surveys, annual inventories of permanent forest health monitoring plots, diagnosis of forest health problems for landowners, and educational programs. During the past year, staff members provided 111 forest insect and disease diagnoses for landowners and homeowners and five forest health education programs to 300 students. Additionally, our forest health specialist continued to monitor permanent plots in the state to track long-term forest health and for invasive pests such as emerald ash borer, Sirex wood wasp, and the Asian longhorned beetle.

**Wildland Fire.** Forest Service personnel help protect Delaware's natural resources through our wildland fire program. Staff members assist volunteer fire companies by helping them suppress wildland fires and providing wildland fire training courses. During FY12, in cooperation with the Delaware State Fire School, Delaware Forest Service provided wildland fire training to 76 individuals; helped volunteer firefighters suppress 16 wildfires that burned nearly 30 acres; and dispatched resources (20-person crews, brush truck, tractor plow operators, equipment manager, and ground support unit leader) at the national level to fight wildland fires and assist with hurricane relief. In total, Delaware wildland fire personnel contributed 964 person-days to the national effort. An in-state prescribed fire program further assisted landowners manage their lands. Three controlled burns were completed on a total of 38 acres. Additionally, staff members provided 105 wildfire prevention (Smokey Bear) educational programs to 9,399 Delaware first-grade students.

**Watershed Protection.** The Delaware Forest Service reviews all forest management operations and activities to ensure compliance with the Forestry Practices Erosion and Sedimentation (E&S) law. In FY12, foresters issued 92 permits on a total of 3,590 acres and conducted 159 site inspections of active forest management operations while also providing technical assistance to forestry operators to help safeguard water quality.

## Forestry Education Program

**State Forest Management.** The Delaware Forest Service manages over 19,000 acres at Blackbird, Redden, and Taber State Forests for a variety of objectives, including wildlife habitat, recreation, timber production, natural resource education, and water quality. In FY12, an estimated 28,542 visitors (up 28% from FY11) logged 29,878 user-days (up 18% from FY11) for activities such as hunting, wildlife observation, hiking, and horseback riding. Two forested parcels (J.G. Townsend and Marvel Tracts) totaling 556 acres were added to Redden State Forest with funding from the U.S. Forest Service's Forest Legacy and Delaware's Open Space Programs.

**Information and Education.** Education is a vital component of each of our technical programs. The Delaware Forest Service attempts to further inform and educate all Delaware citizens about the importance of Delaware's forest resources and the need to properly manage these resources. In FY12, our staff provided forestry educational programs on a wide variety of topics to over 18,000 participants in Delaware's schools, civic clubs, communities, and organizations.

A majority of the work conducted through the Delaware Forest Service is targeted toward achieving the goals outlined in the Delaware Statewide Forest Strategy published in June, 2010. Fulfilling all 78 of the performance goals over a five-year period is central to guiding our efforts and helping ensure that we address the most important issues facing our forests during challenging economic times.

I hope you find this annual report interesting and informative as it outlines the accomplishments for each of the Delaware Forest Service's major programs. The Delaware Forest Service continues to fulfill our mission: to conserve, protect, and enhance Delaware's forests through education, management, and professional assistance.

I encourage you to contact any of our offices or visit [dda.delaware.gov/forestry](http://dda.delaware.gov/forestry) if you need forestry or shade tree assistance or wish to learn more about the Delaware Forest Service.



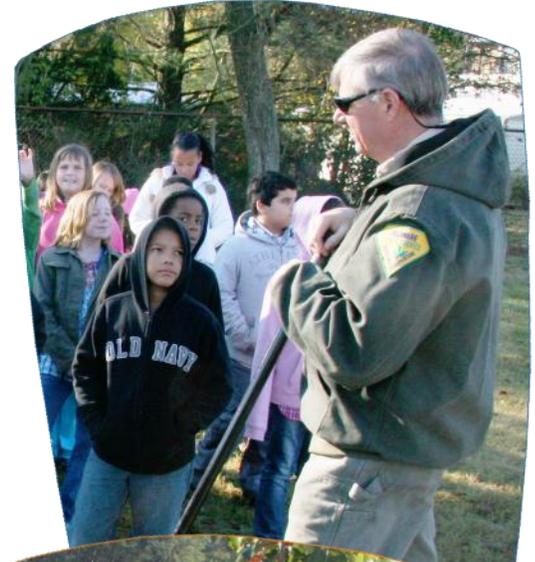
Michael A. Valenti  
Forestry Administrator



# Tree-riffic!

## School Program

*Blades Elementary School is the first school in Delaware to be named a "Tree-riffic School." In addition to learning about trees in their classes, over 500 students also participated in the planting of 30 trees on school grounds that will help improve water quality in the Chesapeake Bay Watershed.*



*Through its Forest Conservation Program, the Delaware Forest Service helps landowners and communities to improve and better manage their forest resources through technical assistance and educational programs.*

# Forest

# Conservation



*One of the challenges facing today's forests is poor management. Many of Delaware's rural forests are managed for timber production. Because it can take at least 40 years to grow a mature crop of timber, many landowners will only harvest timber once during their lifetime. Because of these infrequent harvests, landowners are not regularly exposed to the forest management techniques that would help them better achieve their forestry objectives. The Delaware Forest Service offers professional assistance to help these landowners.*

*Many local communities also suffer the consequences of poor urban forest management. Many do not have professional management plans for their tree resources (street trees and trees on other publicly owned lands), a complete inventory of these trees, or the expertise to manage them. Consequently, many urban forests do not produce their full range of benefits, such as energy conservation and temperature moderation.*

## Urban and Community Forestry Program

The Delaware Forest Service's Urban and Community Forestry Program provided **\$189,982** for community-based tree projects, invasive species management, and various activities to improve air and water quality in the Chesapeake Bay Watershed.



[www.delawaretrees.com](http://www.delawaretrees.com)

### Urban and Community Grants

As part of its Urban and Community Forestry (U&CF) Program, the Delaware Forest Service offers grants to municipalities, educators, non-profit organizations and government agencies for tree planting and tree management projects on public lands. Since the program's inception in 1991, the Delaware Forest Service has awarded over \$1.5 million to more than 200 organizations to improve their urban forest resources. In FY12, the Delaware Forest Service awarded grants totaling \$189,982. Grants are made possible by the U.S. Forest Service's U&CF program and state funds. Grant recipients must provide a 50-50 cost share match which can be met through volunteer labor, donated materials and services, or additional funds such as a local representative's street funds.

### Expanding partnerships to enhance livable communities

The U&CF Program continued its long-term partnership with the Delaware Center for Horticulture (DCH), a member of the Delaware Community Forestry Council, to provide expanded services to the major urbanized areas of the state. DCH administers Arbor Day activities, tree care projects, and volunteer activities for the Newark-Wilmington metro corridor. The U&CF Program gave \$7,500 to support staff efforts in these areas.



Tree management grants help to fund community projects such as street tree inventories and hazardous tree removal.

## FY 12 Urban and Community Forestry Grants



### Tree Management Grants

Community	Award
City of Newark	\$ 2,910
City of Rehoboth Beach	\$ 3,500
Village of Arden	\$ 3,500
Town of Odessa	\$ 1,000
Town of Blades	\$ 3,500
City of Wilmington	\$ 5,000
City of Delaware City	\$ 4,655

Total \$ 24,065



Tree planting grants help promote proper planting and tree care as well as the reestablishment of forested areas within urban settings.

The U&CF Program has partnered with the Delaware Invasive Species Council (DISC) to foster awareness of the negative impact of non-native and invasive species on urban forest resources and to promote action to counteract this growing problem.



### Invasive Species Management Grants

Project	Award
<b>Ardens Building Defensible Spaces Project</b> <i>Partners: Ardencroft, Ardentown, Village of Arden, Naamans Creek Watershed Association, and the Delaware Nature Society</i>	\$10,000
<b>Coastal Phragmites CWMA</b>	\$10,000
<b>Newark Railroad Bamboo Project</b> <i>Partners: City of Newark Parks Department, Newark Water &amp; Waste Department, New Castle Conservation District, and CSX Railroad</i>	\$6,000

Total \$ 26,000

### Tree Planting Grants

Community	Award
New Castle Special Services	\$ 5,000
Town of South Bethany	\$ 5,000
Town of Dagsboro	\$ 3,000
City of Dover	\$ 3,930
Town of Middletown	\$ 5,000
City of Wilmington	\$ 2,905

Total \$ 24,835

Georgetown and Delaware Tech's Owens Campus celebrated Arbor Day with the help of DFS' Urban and Community Forestry Program by planting campus trees within the Chesapeake Bay Watershed.

## Chesapeake Bay Grants

Community	Award
Town of Blades/Blades Elementary	\$ 9,142
Delaware Technical & Comm. College	\$ 1,577
Sussex County Conservation District	\$ 500
Delaware Wildlands	\$ 1,400
<b>Total</b>	<b>\$ 12,619</b>

## Urban Tree Canopy Grants

Community	Award
City of Delaware City	\$ 28,333
City of Newark	\$ 14,333
City of Rehoboth Beach	\$ 32,000
Town of South Bethany	\$ 14,000
<b>Total</b>	<b>\$ 88,666</b>



Above (from left): The Delaware Forest Service's Urban and Community Forestry Program Director Kyle Hoyd joins Georgetown Mayor Brian Pettyjohn, Delaware Technical and Community College official Beth Rodier, and Urban Forestry Outreach Coordinator Marcia Fox.



Delaware Forest Service staff and student volunteers helped plant 27 trees on Delaware Tech's Georgetown campus to improve the Chesapeake Bay.

## Additional Projects

Community	Award
Town of South Bethany	\$ 4,800
Middlesex Beach HOA	\$ 6,000
Kent County Parks and Rec.	\$ 2,997
<b>Total</b>	<b>\$ 13,797</b>





**Urban Forestry Outreach Coordinator Marcia Fox and Allison Brokaw of Westover Hills join to celebrate the community's status as a Delaware Tree Friendly Community. New signs have been installed to acknowledge recipients and promote the program.**

**From left, the Delaware Forest Service urban forester Marcia Fox joins Robert Tunnell, III, owner of the Pot-Nets developments in Long Neck, Sussex County, U&CF Program Coordinator Kyle Hoyd, chief arborist Jay Ashby, and landscaping director Cameron Marcelle to celebrate the communities' recognition by the Delaware Tree Friendly Community Program.**



### Tree Friendly Community Program

Delaware's "Tree Friendly Community Program" is designed to recognize those communities and homeowner associations that are committed to protecting and enhancing our state's urban forest resources. Thirteen communities achieved this recognition in FY12. A community can gain the honor by accomplishing three of the following:

- perform an annual ceremony to promote community forests
- complete a tree project that enhances existing urban forests
- develop a community forestry management plan
- adopt a community tree ordinance that protects trees
- form a tree commission or tree board that serves as the guiding body for tree-related decisions
- have a tree budget of \$1 per residential household.

Sussex County	
<b>New Castle County</b>	<b>Bayside</b>
Edenridge I	Baywood
Edenridge II	Creekside
Tavistock	Coveside
Wawaset	Dockside
Westover Hills Section A	Lakeside
Westover Hills Section C	Seaside



### Tree Campus USA

In FY12, Delaware State University became the first college or university in Delaware to be certified as a Tree Campus USA by the National Arbor Day Foundation. Schools must meet five annual standards:

- Campus Tree Advisory Committee
- Campus Tree Care Plan
- Campus Tree Program with Dedicated Annual Expenditures
- Arbor Day Observance
- Service Learning Project

**Celebrating DSU's Tree Campus USA recognition are: (left to right): Dr. Alton Thompson, DSU Provost and Vice-President of Academic Affairs; Dr. Arthur Tucker, research professor; Dr. Susan Yost, herbarium educator; Harry L. Williams, DSU President; Governor Jack Markell; Dr. Sathya Elavarthi, professor of agriculture; and Michael A. Valenti, State Forester.**

## Tree City USA Program

With guidance from the U&CF Program, 16 communities qualified as a Tree City USA through the National Arbor Day Foundation in FY12. The Tree City USA Program is a community improvement program designed to recognize municipalities that promote and enhance their forest resources. To qualify as a Tree City USA community, a town or city must meet four standards: 1) establish a tree board to develop and administer a public tree management program; 2) develop a community tree ordinance that designates the tree board and gives them responsibility for writing and implementing an annual community forestry work plan; 3) annually spend a minimum of \$2 per resident on its community forestry activities; and, 4) celebrate Arbor Day with a ceremony that includes a proclamation from the mayor and council.



*Below (from left), Governor Markell joins Town of Blades Mayor Michael Smith, Town Administrator Vikki Prettyman, and U&CF Outreach and Partnership Coordinator Marcia Fox to celebrate its first year as a certified Tree City USA.*



*At right, Bethany Beach Public Works Director Brett Warner (left) celebrates its Tree City USA designation by planting a tree on DSU's campus with the Forest Service's Marcia Fox.*



*Dover Air Force Base's Valerie Payton joins Governor Markell on Arbor Day to mark DAFB's 20 years as a Tree City USA.*

### New Castle County

Ardentown

Delaware City

Newark

Odessa

Wilmington

Village of Arden

### Kent County

Dover

Dover Air Force Base

Milford

Smyrna

### Sussex County

Bethany Beach

Dagsboro

Fenwick Island

Lewes

Ocean View

Rehoboth Beach

# Tree Care and Training



## 2nd Arborist and Tree Care Seminar

For the second consecutive year, the Urban and Community Forestry Program hosted its Arborist and Tree Care Seminar to offer training and continuing education credits for arborists and those in the tree care industry.

During the course of the two-day seminar at St. Andrew's School in Middletown on March 6 and 7, over 150 tree professionals attended sessions on diverse topics such as aerial rigging, tree worker safety, historic tree preservation, wood-decaying fungi, pesticide precautions, and urban tree diversity. Guest speakers included Dr. John Ball of South Dakota State University, Dr. Christopher Luley of Urban Forestry LLC, and Professor Amy Brown of the University of Maryland. Attendees were eligible to receive CEU's from the International Society of Arboriculture (ISA) as well as pesticide applicator certification credits.



## Landowner Assistance Programs

**In FY12, the Delaware Forest Service supervised the planting of 220,500 seedlings on 385 acres of private land in Delaware, including 370 acres of loblolly pine reforestation and 15 acres of loblolly pine afforestation.**



### Private Land Management

The Delaware Forest Service assists private landowners in all aspects of forest management. This assistance ranges from the supervision of tree planting and timber stand improvement activities to the preparation of long-term management plans.

In FY12, Delaware Forest Service staff supervised the planting of 220,500 seedlings on 385 acres of privately owned land in Delaware, including 370 acres of loblolly pine reforestation and 15 acres of loblolly pine afforestation. Seedlings for these projects are acquired through the Maryland Forest Service nursery located in Preston, Maryland.

Under the supervision of Delaware Forest Service staff, private contractors plant the seedlings. Delaware Forest Service foresters also wrote 53 stewardship plans for 4,759 acres. The DFS also supervised (Arsenal TM) herbicide application spraying for eight landowners on 603 acres.

### Forest Stewardship

The Delaware Forest Stewardship Program introduces landowners to innovative land management techniques. Any resident who owns five to 1,000 acres of forested land, or land that can be converted to forestland, is eligible for assistance. Delaware's Forest Stewardship Program began in June 1992 in cooperation with the U.S. Forest Service State & Private Forestry Program. The Forest Stewardship Committee, consisting of landowners, foresters, and natural resource managers, helps the Delaware Forest Service develop and promote the program. The Delaware Forest Service helps landowners develop a stewardship plan, offers advice on plant species, and oversees tree planting and timber stand improvement projects.

This fiscal year, state service foresters prepared 53 stewardship plans for properties in New Castle, Kent, and Sussex Counties. These plans provided management goals and prescriptions for 4,759 acres of land. Property owners established plans for soil and water quality protection, forest resource management, and wildlife habitat enhancement.

### **CREP Program**

The Delaware Forest Service partners with NRCS/CREP to further the forested buffer goals of USFS/DFS, and continue to monitor existing CREP sites for ongoing compliance.

### **State-Funded Cost Share Program**

In FY06, the General Assembly established a state-funded forestry cost share program totaling \$75,000. These funds are generated from timber sale revenues from the State Forests. These additional timber sales help support the forest industry on the Delmarva Peninsula and the revenue benefits Delaware's communities and private landowners. The \$75,000 is divided between cost-share assistance to landowners (reimbursing them 50 percent of their actual costs) for forest management projects and Delaware's grants to communities for tree planting and tree management projects on publicly owned lands. The funds provided to landowners assisted with tree planting and timber stand improvement projects. These funds are particularly important to landowners because many federal forestry cost-share programs have been either discontinued or significantly reduced. In FY12, \$7,225 was spent to assist two individual landowners with silvicultural practices on 25 acres.



### **New Forest Management Database**

The Delaware Forest Service adopted a new forestry activity tracking system in 2010 that relies on Geographic Information System (GIS) technology. However, in FY13, DFS will migrate to SMART, a national web-based data entry and report writing geodatabase tool designed to support the Forest Stewardship Program. Administered by the U.S. Forest Service, SMART is implemented by state forestry agencies to allow field foresters, working with private landowners, to prepare Forest Stewardship Management Plans, record contact and other information, track plan implementation accomplishments, and spatially display and analyze plan locations and associated activities.

# *Forest Landowner Assistance*



## *Program Highlight*

### **Commercial Operator Workshops**

Through its Forest Stewardship Program, the DFS continued its outreach efforts in FY12 to the private landowners whose cooperation is essential to achieving the goals in its five-year strategic plan. In addition to these efforts, the DFS also held three workshops for forestry consultants and commercial operators (one in each county) to promote its technical assistance services, solicit feedback on regulatory and forest management issues, and foster cooperation on the development of better measurements for harvest removal volumes.

A second major challenge facing Delaware's forests is their long-term health. Wildfire, forest pests (insects and diseases), non-native invasive plants and animals, and improper forest management techniques all threaten our forests. Each year, hundreds of acres of Delaware forests are affected by wildfire, exotic species, or forest pests such as the gypsy moth, dogwood anthracnose, or the southern pine beetle. Furthermore, improperly conducted forest management activities, primarily timber harvests, not only adversely impact the forest itself, but also affect other resources—such as water quality.

Through its **Forest Protection Program**, the Delaware Forest Service strives to protect and improve the health of Delaware's forests through wildfire prevention, watershed protection, and forest health monitoring.



# Forest Protection

## Wildland Fire Program

### Wildland Fire Program

The Delaware Forest Service maintains a cooperative agreement with the U.S. Forest Service to assist local volunteer fire companies with wildfire suppression and prevention on Delaware's one million acres of undeveloped land, which includes 380,000 forested acres.

Delaware's volunteer fire companies can request the assistance of Delaware Forest Service personnel, when needed, for wildland fire suppression. The Delaware Forest Service provides trained personnel, a bulldozer equipped with a fire plow to establish firebreaks, as well as wildland fire suppression tools such as fire rakes, hose, and collapsible backpack water tanks. In FY12, the Delaware Forest Service responded to 16 wildfires that burned nearly 30 acres.

### Volunteer Fire Assistance Program

Each year, through the U.S. Forest Service's Volunteer Fire Assistance (VFA) Program, the Delaware Forest Service offers a grant to help provide basic wildland firefighting courses for volunteer firefighters. This year, \$16,203 was awarded to the Delaware State Fire School to help offset the costs of hosting these courses for volunteer firefighters.

The 60 volunteer fire companies in Delaware are vital to the Delaware Forest Service because they provide much of the manpower and equipment to fight wildfires in the state.

The Delaware Forest Service assisted 42 of Delaware's 60 volunteer fire companies (70%) with wildfire suppression, loaning of equipment, or training.



Photo by Stephen Johnas

In FY12, the DFS assisted 42 of the 60 volunteer fire companies (70%) with wildfire suppression, loaning of equipment, or training. The Delaware Forest Service administered a sixth round of an equipment grant program available to all Delaware volunteer fire companies. Fire companies can receive up to \$3,500 for the purchase of wildland fire-related equipment and tools; these grants require an in-kind match from the fire company.



Nineteen fire companies are committed to receive a total of \$40,000 in matching federal funds to add tools and equipment to their wildland firefighting inventories. This grant program is a very efficient way to use federal dollars to assist volunteer fire companies throughout Delaware. Over the previous six years (2006–2011), volunteer fire companies received \$142,600 in assistance and matched that amount with \$272,549. For every federal dollar spent, another \$1.91 in non-federal funding was matched to this program.

Fire Co.	Station #	County	Award	Items
Delaware City	15	New Castle	\$ 2,450	Skid unit, backpack pump, hand tools
Good Will	18	New Castle	\$ 2,450	Forestry hose, chain saw, backpack pumps, rakes, axes, shovels
Port Penn	29	New Castle	\$ 2,500	Portable pump, hose
Bowers	40	Kent	\$ 2,450	Nomex, floating strainer, tools
Cheswold	43	Kent	\$ 2,450	Hose, nozzles, 5-way manifolds
Smyrna	44	Kent	\$ 1,717	Boots
Felton	48	Kent	\$ 2,450	ATV-for off-road suppression
Harrington	50	Kent	\$ 2,450	Suction hose, nozzles, chain saw, vests
Hartly	51	Kent	\$ 2,000	Personal protective equipment, foam
Houston	52	Kent	\$ 2,450	PPE, nozzles, adapters, hose, lights, chain saws, chains
Leipscic	53	Kent	\$ 2,250	Foam unit, mounting brackets, foam
Bridgeville	72	Sussex	\$ 2,450	Skid unit, forestry hose
Dagsboro	73	Sussex	\$ 413	Fuel containers
Frankford	76	Sussex	\$ 2,450	Heavy duty bumper, winch, winch accessory kit
Greenwood	78	Sussex	\$ 953	Chain saws, shrouds
Indian River	80	Sussex	\$ 2,450	Skid plate, PPE, foam, backpack pumps, forestry hose
Laurel	81	Sussex	\$ 1,500	Forestry hose, nozzles
Lewes	82	Sussex	\$ 2,450	Hose trays, mounting brackets, hose, fittings, foot valve
Selbyville	88	Sussex	\$ 1,717	Chain saws, hose packs, drip torches, hand tools, safety glasses
		<b>TOTAL</b>	<b>\$40,000</b>	

### Wildfire Training

Every year, members of the Delaware Forest Service assist with the training of volunteer firefighters at the Delaware State Fire School. A total of 76 individuals completed the basic wildfire courses this year.

These courses included Basic Firefighter Training, Introduction to Wildland Fire Behavior, Introduction to the Incident Command System, and Human Factors in the Wildland Fire Service. In addition, three Delaware Forest Service personnel attended a helicopter long line refresher training course during FY12.

To complement classroom courses in wildland fire, the Delaware Forest Service hosts an annual Fire Camp that simulates a western firefighting assignment. This year's one-day event was held on April 14 at Redden State Forest near Georgetown, where volunteers received hands-on training related to wildfire control. Thirty individuals attended this year's camp. The live burn exercise was cancelled due to extremely high fire danger.

Also, to augment the annual fire camp, this year the Delaware forest Service offered a standard 8-hour refresher on April 28 at Blackbird State Forest. This was similar to fire camp but without the field exercises and live burn. Eighteen individuals attended this training.

**Forest Service staff conducted a prescribed burn at Delaware's Cape Henlopen State Park.**

### **Wildland Fire Program offers cost-share assistance grants**

The Wildland Fire Program offers cost-share assistance grants to communities to reduce the danger of wildland fires and is used to perform vegetation management activities to reduce problematic fuels such as the giant reed grass phragmites. In FY12, seven grants totaling \$43,531 were funded with State Fire Assistance (SFA) funding. Communities receiving these funds were: Pickering Beach (20 acres), Blackwater Village (10 acres), Bethany Bay (20 acres), Bowers Beach (20 acres), Slaughter Beach (25 acres), the City of Lewes (60 acres), and Ocean View West (5 acres). SFA funding requires a 50-50 cost-share match with non-federal funds, which communities typically supply through volunteer labor, donated materials and services, or additional cash funds.



### **Prescribed Fire Program**

In FY12, the Delaware Forest Service continued with a successful prescribed burning program, completing three controlled burns for a total of 38.3 acres. This included the 24-acre burn at Cape Henlopen State Park that received much positive media attention. Low intensity, prescribed fires are beneficial to the environment in many ways. For example, existing fuel loads are eliminated thus negating the possibility of a subsequent high intensity wildfire, the soil is enriched with nutrients that will help existing trees and the next generation of herbaceous plants, and habitat for a variety of animal species is greatly enhanced. The Delaware Forest Service plans to continue prescribed burning in years to come.



***Daryl Trotman of Ellendale is a veteran of the Delaware Wildland Fire Crew who fought the Great Dismal Swamp blaze.***

### **Wildland Fire Highlight**

Through annual wildfire training sessions, a partnership with the Delaware State Fire School, and the opportunity for many trainees to experience firsthand the western wildfire environment, the Delaware Forest Service continued to recruit volunteers for the wildland firefighting program in FY12. While the number of active red carded individuals has decreased slightly this year, the DFS continues to mobilize fire crews, engines, and single resources whenever the need arises.

- On August 11, 2011, the DFS dispatched a 20-member crew on a 14-day assignment to the 6,377-acre Lateral West Fire in Virginia's Great Dismal Swamp National Wildlife Refuge.
- In the wake of Hurricane Irene in late-August, 2011, the DFS formed a 20-person crew composed of 13 members from Delaware and Maryland and seven members from West Virginia who aided the Federal Emergency Management Agency (FEMA) with its post-hurricane relief efforts in the New England region. The crew was stationed at the Stewart Air National Guard Base near Newburgh, NY.
- On June 21, 2012, the Delaware Forest Service mobilized one 20-person Type 2 Initial Attack crew to the High Park Fire in southwestern Colorado due to extremely high fire activity during the early spring.



***Thomas "Chip" Kneavel of Newark uses a fire hose to spread water onto the 6,000-acre wildfire in Virginia's Great Dismal Swamp National Wildlife Refuge. Kneavel works for DNREC's Parks and Recreation Division in New Castle County.***

**Incident 1: Lateral West Fire**  
*Virginia*

**Incident 2: FEMA Hurricane Relief**  
*New York*

**Incident 3: Pine Ridge & Arapaho Fires**  
*Colorado and Wyoming*

Crew Member	Agency
Erich Burkentine, CRWB	DFS
Glenn Gladders	DFS
Sergio Castillo	(AD)
Samual Topper	DFS
Andrew B. Ney	(AD)
William Seybold	DFS
Thomas Kneavel	DNREC
Adam Keever	DNREC
Todd W. Shaffer	(AD)
Jeffery Wilson	(AD)
James Charney	DNREC
Michael Sethman	DFS
Jonathan Richardville	(AD)
Andrew Rawling	DNREC
Henry Poole	DFS
Daryl Trotman	DFS
Matthew Chamberlain	DNREC
Scott Estep	(AD)
John Cirifici	(AD)
Stephen H. Johnas	(AD)

Crew Member	Agency
Michael Valenti, CRWB	DFS
Howard Harrison	(AD)
Scott Veasey	(AD)
Timothy Moore	(AD)
Michael Krumrine	DNREC
Robert Baldwin	DNREC
Todd Gsell	DFS
Eva Wilson	(AD)
Nathaniel Sommers	(AD)
Brian Ward	(AD)
Grant Pittaway	(AD)
Timothy Laird	(AD)
Justin DelCollo	(AD)
Timothy Casto	DNREC
James Ross	W. Vir.
Jason Jones	W. Vir.
Randall Nestor	W. Vir.
D'andre Merkeis Hawkins	W. Vir.
Delvin Marqui Judge	W. Vir.
Marc J. Rider	W. Vir.

Crew Member	Agency
Glenn Gladders, CRWB	DFS
Robert Baldwin	DNREC
Andrew B. Ney	(AD)
Todd Gsell	DFS
Daryl Trotman	(AD)
Kyle Hoyd	DFS
Michael Krumrine	DNREC
Todd W. Shaffer	(AD)
James Charney	DNREC
Jeffrey Wilson	(AD)
Brandon Bruce	(AD)
Stephen Johnas	(AD)
Jonathan Richardville	(AD)
Tyler Torres	(AD)
Chris Skrobot	(AD)
Adam Keever	DNREC
Brian Ward	(AD)
Erich Burkentine	DFS
Samual Topper	DFS
Johnathan Stave	Penn.

DFS Employees indicated by blue text.

*In addition to supporting national and state agencies with wildfire suppression, the Delaware Forest Service also fields teams of trained personnel to assist during other emergencies, such as hurricane relief efforts in Florida in 2004, and in New York in 2011.*



*(Back, left to right) State Forester Michael Valenti, Dover; Brian Ward, Houston; Grant Pittaway, Delaware City; Robert Baldwin, Worton, MD; Scott Veasey, Millsboro; Michael Krumrine, Magnolia; and Nathaniel Sommers, Smyrna. (Middle, left to right) Tim Moore, New Castle; Timothy Laird, Wilmington; Eva Wilson, Newark; Justin DelCollo, Middletown; Jason Jones, W. Vir.; Marc Rider, W. Vir.; Todd Gsell, Townsend; Timothy Casto, W. Vir.; and D'andre Hawkins, W. Vir. (Front, left to right) James Ross, W. Vir.; Howard "Duke" Harrison, Wilmington; Randall Nestor, W. Vir.; and Delvin Judge, W. Vir.*

**FEMA Hurricane Irene Relief  
New York**

Delaware's wildfire crew mobilizes at Blackbird State Forest on June 24, 2012.

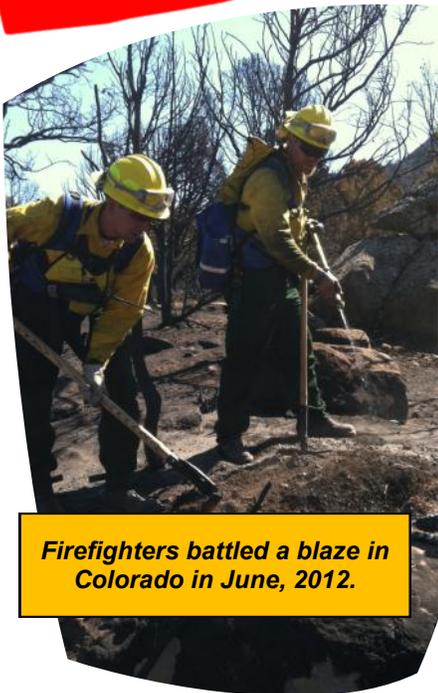


*(Front, left to right): Adam Keever, Port Penn; Erich Burkentine, Milton; Samual Topper, Federalsburg, MD; Glenn Gladders, Dover; Kyle Hoyd, Felton; Jonathan Richardville, Wilmington; Tyler Torres, Smyrna; Todd Shaffer, Atglen, PA; and Andrew Ney, Felton. (Back, left to right): Chris Skrobot, Claymont; Johnathan Stave, Bear; Brian Ward, Houston; Todd Gsell, Townsend; Michael Krumrine, Magnolia; Daryl Trotman, Ellendale; Jeffery Wilson, Clayton; Stephen Johnas, Wilmington; Brandon Bruce, Middletown; James Charney, Felton; and Robert Baldwin of Chestertown, MD.*

**Wildland  
Fire Crew  
WESTERN FIRE  
ASSIGNMENTS**



**Delaware firefighters put out hotspots in Colorado.**



**Firefighters battled a blaze in Colorado in June, 2012.**



**DFS Crew at Arapaho Fire near Wheatland, Wyoming.**

# Watershed Protection Programs

The DFS issued 92 E&S permits on a total of 3,590 acres and conducted 159 site inspections.



## Forestry Practice Erosion and Sedimentation (E&S) Law

DFS foresters review E&S permits for all silvicultural operations over one acre and provide educational materials and programs to landowners and loggers. By using Best Management Practices, such as forested buffers along waterways, water quality is protected by minimizing erosion and sedimentation. The program stresses the importance of properly conducted activities on properties that contain, or are adjacent to, open water by conducting pre-sale inspections and educating loggers about the need to protect open water.

In FY12, the Delaware Forest Service issued 92 permits on a total of 3,590 acres and conducted 159 site inspections. Most of the state's silvicultural activities occurred in Kent County (49 out of the 97 projects), followed by Sussex County (41), and New Castle County (7).

One of the Forest Service's performance measures is to increase the percentage of timber harvests on nonindustrial private forest (NIPF) lands that follow a forest management plan. While all timber harvests must have an approved E&S permit, Delaware does not require a forest management plan for a timber harvest. In FY12, 47 percent (1,706 of 3,950 acres) of NIPF harvests occurred on forestlands with a plan.

## Seed Tree Law

The Delaware Forest Service administers the Delaware Seed Tree Law that applies to all forested tracts of 10 acres or more containing a combination of at least 25 percent loblolly pine, shortleaf pine, pond pine, or yellow-poplar. Landowners with these woodlands must provide for reforestation of these lands unless there are at least 400 healthy, well-distributed seedlings present on each acre following the harvest.

The Seed Tree Law was established due to the loss of thousands of acres of loblolly pine forests in Delaware between 1959 and 1986. Pine and yellow-poplar woodlands are vital to Delaware's economy and environment, and the Seed Tree Law will ensure the continued contributions of these important forests. In FY12, 14 harvests totaling 453 acres were approved under the Seed Tree Law. The Delaware Forest Service will continue to monitor these properties to ensure proper reforestation.



*From left, State Forestry Administrator Michael Valenti joins Patricia Huff Stenger and Jeanne Sposato after acquiring 339 acres of forestland from the Sposato and Huff families that is now part of Redden State Forest. Delaware's Open Space Program and U.S. Forest Legacy Program funded the newly acquired land.*

## Forestland Preservation

Delaware's Forestland Preservation Program (FPP) was established in July, 2005 to preserve forests through perpetual conservation easements. In FY12, the Delaware Forest Service provided forest management plans for 19 farms being considered for the Aglands Preservation Program. These 19 farms (two in New Castle County, 10 in Kent County, and seven in Sussex County) cover over 1,300 forested acres.



## Forest Legacy Program

On May 24, 2012, the Delaware Forest Service continued its progress on the Green Horizons project by completing the second part of Phase VII with the acquisition of the 339-acre Marvel Tract. The richness of natural resources protected on this upland mixed pine-hardwood tract made this a strategic acquisition. Purchased from Marvel Enterprises, LLC and RJDJG, LLC, this tract is now part of Redden State Forest near Georgetown and will be managed for a variety of objectives including hunting, timber production and recreational use by the public. This fee simple purchase was made possible with \$2,010,000 from U.S. Forest Service Forest Legacy Program funds and \$670,000 provided by the Delaware Open Space Council.

*The Delaware Forest Service works with private landowners, other state agencies, and educational institutions to conduct forest pest surveys and provide technical assistance to enhance and maintain healthy forests. Foresters emphasize prevention strategies to help minimize the destructive effects of serious forest pests, such as the gypsy moth and southern pine beetle. Permanent forested plots monitor the condition and health of Delaware's forests on an annual basis.*

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## Forest Health Monitoring

**In FY12, Delaware Forest Service provided 111 insect and disease diagnosis visits to landowners and homeowners, and five insect, disease, and forest health educational programs to 300 students.**

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### Technical Assistance

This year, the Delaware Forest Service conducted 111 insect and disease diagnosis visits to landowners and homeowners. Our Forest Health Specialist also provided five insect, disease, and forest health educational programs to 300 students.

### Southern Pine Beetle (SPB)

Unusually cold temperatures during the last several winters has likely destroyed a high percentage of overwintering SPB.

Delaware continued to participate in the Southwide Southern Pine Beetle Pheromone study with four traps in Sussex County in May 2011. Counts of SPB and predatory clerid beetles from these traps confirmed that SPB populations remain at low levels in Delaware. No damage from SPB has been reported in Delaware for more than five years.

### Gypsy Moth

Gypsy moth populations in Delaware were reduced by the fungus *Entomophaga maimaiga* in the mid-1990's. Populations appeared to be growing somewhat from 2006 through 2009 based on aerial surveys for defoliation, with up to 800 acres per year defoliated in southern Sussex County. However, defoliation has since declined to almost nil. A very wet spring likely increased the effectiveness of the *Entomophaga* fungus, killing a large percentage of the gypsy moth larvae that eat the leaves of oak and sweetgum trees. Gypsy moth activity will continue to be monitored in coming years.

### Asian Longhorned Beetle

The Asian longhorned beetle, *Anoplophora glabripennis*, is a newcomer to North America and is killing street trees in New York, New Jersey, Massachusetts, and Ohio. This potentially harmful insect is native to Japan, Korea, and southern China. Unlike other longhorned beetles, which usually attack stressed, diseased, and dying trees, *Anoplophora glabripennis* attacks and kills healthy trees.

Consequently, there is concern that this exotic insect will become a major pest in North America. Asian longhorned beetles attack maple (*Acer*) trees including Norway, red, sugar, and silver maple, and boxelder. Horse-chestnut (*Aesculus*) and willow (*Salix*) trees are also attacked. Adult beetles are shiny black with white blotches on their hardened outer wings. Their antennae are very long with alternating black and white banding on each segment. The most obvious sign of a beetle infestation is the presence of their characteristic 3/8-inch diameter circular exit holes on the trunk, branches, and exposed roots.

### Emerald Ash Borer (EAB)

This Asian pest has been detected in numerous eastern states, including Pennsylvania, New York, Maryland, and Virginia. It feeds exclusively on ash trees and, in areas where it has been established for several years, kills all ash trees. Although only one percent of Delaware's forest trees are ash, some neighborhoods in New Castle County rely almost exclusively on ash for street trees.

DDA staff continued to survey for this pest in 2011, using three survey techniques. First, the Delaware Forest Service assisted the Plant Industries Section by installing and servicing traps designed to detect EAB. Second, visual surveys were carried out in high-risk areas along the I-95 and Route 1 corridors. Finally, a "biosurveillance" technique using wasps that prey on EAB was employed.

### Sirex Wood Wasp

An exotic wood wasp, *Sirex noctilio*, has been found in the wild in New York State and Pennsylvania. This wood wasp attacks pine trees and represents a serious potential threat to Delaware's loblolly pine resource. Adults can disperse 20 miles or more. A survey program was initiated in Delaware in 2006 using Lindgren funnel traps baited with chemical lures. In 2011, 18 traps were placed in pine woodlots throughout the state, from Hoopes Reservoir in northern New Castle County to a site near Millsboro in southern Sussex County. Early detection would allow a more effective and timely response should this European pest be found here.

# Program Highlights

## Beech Bark Disease

American beech (*Fagus grandifolia*) is a common tree in Delaware and is easily recognized by its smooth gray bark. A stately forest tree, beech also provides food for deer, squirrels, and, in much of its range, black bears. Unfortunately, a non-native disease complex called beech bark disease (BBD) has killed millions of beech trees in the northeast. Currently found from Canada down the Appalachians as far as West Virginia, BBD begins with infestation by a scale insect, followed by infection of a destructive fungus. Most of the beech trees in infested stands die within a few years.

Three sites in northern Delaware were surveyed for BBD in 2011 as part of a coordinated effort also involving New Jersey, Maryland, and West Virginia. At each site, thirty trees were inspected for the presence of scale and symptoms of BBD. Trees were also photographed and GPS locations recorded, which will allow for follow-up surveys. Fortunately, beech bark disease was not found in Delaware in 2011. Surveys will continue in coming years as the disease continues its southward spread.

# Forest Health



## Study Links Salamanders to Forest Health

For 14 years, State Forester Michael Valenti has used red-backed salamanders (*Plethodontids*) as a way to gauge the health of Delaware's forests by indicating variations in air quality and moisture levels over an extended period of time. The annual field research was spotlighted in an article that appeared in the April 16, 2012 edition of *The News Journal* by veteran journalist Molly Murray.

Originally funded by grants from the U.S. Forest Service, Valenti has carried on with the research because it is a low-cost way to sample changes in forest habitat. As reported in the article, salamanders are useful because they don't travel very far and therefore offer a good indication of localized conditions. The small amphibians play an important role as sentinels of their broader environment because "changes in land use, hydrology, and even weather can play a big role in the health of the salamander population," Murray wrote.

Special thanks to:

**THE NEWS JOURNAL**

Article by: MOLLY MURRAY

# Forestry Education



*The lack of public knowledge about the importance of our forests, and the professional services available to assist landowners and communities with the management of these forests, is the third challenge facing our forests. Currently, many landowners and community leaders are unaware of the Delaware Forest Service programs available to help them manage their forest resources.*

*In addition, many Delawareans are not familiar with the educational and recreational opportunities available at our three State Forests. The Delaware Forest Service attempts to better educate and inform all citizens about the importance of our forests through our Forestry Education Program.*

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## Delaware State Forests

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The Delaware Forest Service is committed to both providing and expanding its numerous educational, recreational, and demonstration opportunities on over 19,000 acres at Blackbird, Redden, and Taber State Forests. These valuable public resources are managed for a variety of objectives, including wildlife habitat, recreation, timber production, natural resource education, and water quality.

In FY12, an estimated 28,542 visitors (up 28% from FY11) logged 29,878 user-days (up 18% from FY11) for activities such as hunting, wildlife observation, hiking, and horseback riding. Natural resource education is also a vital component of the activities at the state forests. Educational opportunities include on-site inquiries and organized tours, primarily for school groups. In addition, two forested parcels (J.G. Townsend and Marvel Tracts) totaling 556 acres were added to Redden State Forest with funding from the U.S. Forest Service's Forest Legacy and Delaware's Open Space Programs.



**Milford High School's FFA Team, guided by their teacher Scott Haldeman, captured the 2012 Delaware FFA Forestry CDE held at Redden State Forest on June 26. Pictured (from left) are students Michael Skivers, Mason Torbert, Candice Reif, and Mikaela Hermstedt.**

*In FY12, an estimated 28,542 visitors (up 28% from FY11) logged 29,878 user-days (up 18% from FY11) for activities such as hunting, observing wildlife, horseback riding, and hiking.*



*Education centers at Blackbird and Redden State Forests are ideal for school programs and field trips.*

## **Blackbird State Forest**

Blackbird State Forest, located northwest of Smyrna, covers approximately 5,600 acres. The ten tracts of Blackbird State Forest are open to the public for nature walks, hiking, jogging, and horseback riding all year. It features a 1/2-mile, wheelchair-accessible wildlife and nature interpretation trail on the Tybout Tract and the Blackbird Education Center on the Meadows Tract. Long-range management plans for Blackbird State Forest include timber production, wildlife habitat, recreation, soil and water protection, wetland and endangered species protection, and public education.

## **Blackbird State Forest Education Center**

In FY12, the staff continued providing educational programs at the Blackbird State Forest Education Center on the Meadows Tract. Complementing the facility at Redden State Forest, the center has two meeting spaces and interactive displays.

## **Blackbird State Forest Highlights**

- 40-acre selection harvest completed on Dulany Tract.
- Improvements to the hydrology of the agricultural fields was completed by forming and fixing drainage swales on 111 acres of the Barlow Tract and 115 acres of the Gonce Tract.
- 4,000 oak seedlings were planted on 10 acres of the Borthwick West parcel.
- 1000 oak seedlings were planted on 2.5 acres of the Beck Tract.
- Acquired the 20-acre Sheats property connecting the Meadows Tract with the Wright Tract.
- Re-signed a memorandum of understanding with the U.S. Air Force on using BSF for Search and Rescue and Evasion tactical training on the Cypress Complex.

Blackbird State Forest is also a popular site for special events. Groups holding activities in FY12 included: Delmarva Driving Club, Wicomico Hunt Club, MS Bike-a-thon, the Delaware Webfooter Walking Club, Envirothon training, Markland Medieval Re-enactment Club, and East Coast K-9 Search and Rescue training.

## **Redden State Forest**

Redden State Forest, located north of Georgetown, totals approximately 12,255 acres. These lands are managed on a multiple-use basis, including timber production, wildlife habitat improvement, soil and water quality protection, and recreational use.

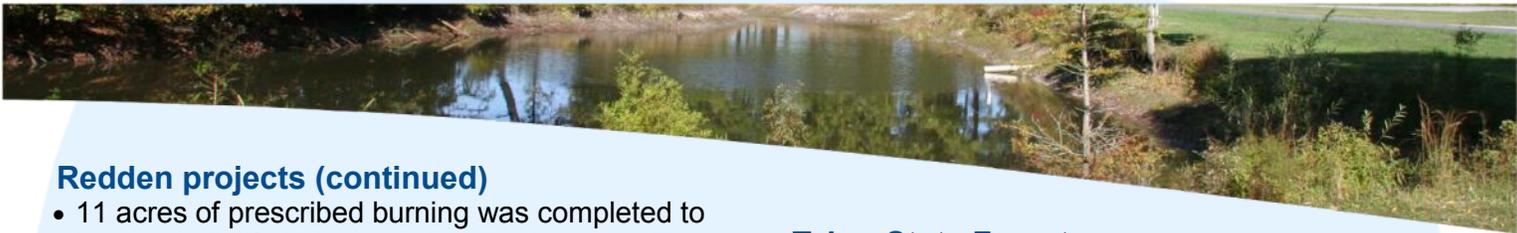
Redden State Forest remains a popular site for special events. Groups holding annual meetings were: Delmarva Driving Club, Wicomico Hunt Club, Southern Delaware Therapeutic Horse Association, Sussex County Volunteer Firemen's Association, the Crop Walk Benefit, DEF&W Kids Day, Arabian Horse Association, Ellendale Ruritan Club, Friends of the Inland Bays, Mustang and Burro Club, Hospice's annual Day Camp, 4H's fall gathering, FFA forestry contest, East Coast K-9 Search and Rescue training and Delaware State Police K-9 training.

## **Redden State Forest Highlights**

- A stream restoration project is planned on the Deep Creek as an effort to improve the Nanticoke River Watershed. This project will restore drainage into the flood plain during flood stage events and help divert silt out of the main stream channel.
- 126 acres of pre-commercial thinning will be completed on the Headquarters and Chesapeake Tracts in early fall of 2012.

## **Major projects at Redden**

- The 160-acre pulpwood thinning project that began in winter of 2012 on the Day Tract was completed.
- A 35-acre clearcut harvest was completed on the Bailey Tract in the spring of 2012.
- 27 acres of a 39-acre clearcut harvest sold in April of 2011 was completed on the Headquarters Tract.
- 34 acres of a clearcut harvest sold in June of 2012 was completed on the Day Tract.
- An 809-acre pulpwood thinning sale including stands on the Bailey, Chesapeake, Deep Creek, Ellendale, Jester, Long, Owens, and J.G. Townsend Tracts was sold in April of 2012
- The most recent land acquisition on the Redden State Forest was the former Marvel property which totaled 339 acres. This will now be called the Marvel Tract. In addition, 217 acres were acquired from J.G. Townsend Inc. This property has been included in the Ellendale Tract. With the new addition, the Ellendale Tract is now 2,323 acres in size.



### Redden projects (continued)

- 11 acres of prescribed burning was completed to improve wildlife habitat on the Headquarters Tract.
- Two water control structures were installed on the Headquarters Tract working in conjunction with the U.S. Fish and Wildlife Service. These structures help regulate the amount of water retained or released from this tract depending on the need during abnormally dry periods or times when the water table remains too high for sustained periods.
- 356.5 acres were sprayed to aid in hardwood control after pulpwood thinning in multiple stands on the Headquarters and Chesapeake Tracts. This also helps prepare for prescribed fire in these stands.

### Upcoming projects

- Continue forest fuels reduction using prescribed fire in the pulpwood stands that were recently thinned on the Ellendale, Jester, Headquarters, Chesapeake and Eskridge Tracts.

### Taber State Forest

Taber State Forest is located west of Harrington on Burrsville Road and remains in its natural, primitive state. The 1,242-acre forest is open daily or public hiking, observing wildlife, and in-season hunting.

### Taber State Forest Highlights

- A 36-acre stand of loblolly pine was thinned in the spring, generating income while giving remaining trees better spacing for future growth.
- A survey of part of the eastern boundary was completed early this year. Issues brought forth by the survey will likely be resolved during leaf-off conditions this winter.
- The family cemetery plot of former Delaware Governor Saulsbury was weeded and the fence was repaired.

Foresters Erich Burkentine and Samuel Topper helped to select and cut a loblolly pine at Redden State Forest to be used as a mast for Captain Ed Farley's skipjack in the Chesapeake Bay. The event was featured in an article by reporter Molly Murray on Feb. 27, 2012 in the NEWS JOURNAL.



### State Stewardship Funds

Delaware's State Forests have grown significantly in the past 15 years, thanks to funding through Delaware's Open Space Program and special appropriations. Our State Forests have increased from 7,200 acres in 1991 to over 19,000 acres today. With this more than doubling in size has come an increase in expenses to maintain these lands. The 141st General Assembly passed House Bill 192 in 2002 that established a State Lands Stewardship Account. This account provides some of the interest from the Delaware Land and Water Conservation Trust Fund to the state land managing agencies to manage and preserve the biological and cultural resources on state lands. To this end, the Delaware Forest Service received \$74,482 from the account as well as \$784 in interest during FY12.

The DFS spent \$148,880 during FY12 on a variety of projects, including reforestation and timber stand improvement, access road and trail improvements, repairs and maintenance to historic structures at Redden State Forest, and wildlife food plots. These additional funds are vital to the Forest Service's efforts to maintain and improve our expanding State Forests.



Funding from the State Lands Stewardship Account helps to maintain the historic Redden Forest Lodge.

# Information and Education

## Information and Education

The Information and Education Office coordinates all of the Delaware Forest Service's information and education activities. Staffed by a full-time Community Relations Officer and a full-time Trainer-Educator, it informs the public of the agency's services and also provides quality environmental education opportunities.

## Education Centers

The Delaware Forest Service operates and manages education centers at Redden State Forest and Blackbird State Forest. Both house a variety of interactive displays on Delaware's forests and their management, with comfortable work areas for students and teachers to participate in educational activities. Each center has a classroom for indoor meetings, along with outdoor educational trails for a more dynamic learning experience. In FY12, three schools comprising 189 students visited the Blackbird State Forest Education Center and two schools totaling 220 students used the Redden State Forest Education Center. At both centers, students learned about Delaware's forests and how people and animals utilize them. Other organizations also used the education centers for meetings.



The 2012 FFA Forestry CDE was held at the Redden Forest Education Center.

separate, wrap, and bag each seedling. Staff then delivered the seedlings directly to the schools to help ensure seedling survival.

In addition, Delaware Forest Service staff performed seven Arbor Day ceremonies at elementary schools across the state reaching 750 children. Staff also participated in three community Arbor Day celebrations statewide.

## Arbor Day Poster Contest

The Delaware Forest Service invites schools K-5 throughout the state to participate in the Arbor Day Poster Contest. This year's poster theme was "Trees are Terrific...from Acorn to Oak!" Participating elementary schools organized preliminary contests and forwarded the first, second, and third place entries to the Delaware Forest Service for the final judging. Poster contest winners were selected for each county in the following categories: kindergarten, first and second grade, third and fourth grade and fifth grade. Each winner received an ornamental tree to plant at their school and a \$50 U.S. Savings Bond. Nathan Morris, a fifth grade student at Christ the Teacher School was selected as the overall state winner. Nathan received an additional \$50 U.S. Savings Bond.

In all, over 130 classes from 43 private, public, and home schools, and youth groups participated in the FY12 contest, and winners were honored at the state's Arbor Day Ceremony at Delaware State University in Dover. Once again this year, Governor Jack Markell presented the students with their savings bonds.



The winning poster by Nathan Morris, 5th-grader at Christ the Teacher School in Newark.



Blackbird Forest Education Center features a variety of interactive exhibits.

## Education Programs

### Arbor Day Overview

The Delaware Forest Service sponsors annual Arbor Day activities including a poster contest and free seedling program and presents Arbor Day and tree education programs in schools statewide during April.

### Annual Free Seedling Program

Students in kindergarten to grade five received over 5,000 seedlings through the annual Free Seedling Program. Classrooms must participate in the Arbor Day Poster Contest to be eligible for free seedlings and tree programs. Delaware Forest Service staff delivered the seedlings to public and private schools statewide. Local senior volunteers individually package the seedlings for the students. These volunteers provide an invaluable service to the Delaware Forest Service as they



### Fire Prevention

Every October (Fire Prevention Month), Delaware Forest Service staff offer fire prevention programs featuring Smokey Bear to first grade classrooms and other community groups. In FY12, staff provided 105 fire education programs to 9,399 students. Other efforts included participation in volunteer fire company open houses and community events.

This year, Delaware Forest Service personnel presented fire prevention materials to children and their families at several community events, including the Abbott's Mill Fall Festival in Milford, the Apple Scrapple Festival in Bridgeville, several community holiday parades, and volunteer fire company open houses.

### Other Educational Programs

Throughout the year, the Forest Service offers special educational programs for students as well as training programs and presentations for community groups and other organizations.

### Adult Programs

Forest Service staff performed 20 workshops for over 626 people on such topics as grant writing, urban tree care, and GIS/GPS. Attendees included other state agencies, nature center managers, and community leaders.

### Student Programs

Delaware Forest Service staff visited 39 classrooms as part of our speaker's bureau. Over 2,946 students learned about wildland firefighting, insects and forest ecology, wood products, watershed protection, and urban forestry through in-class presentations, Super Science Day activities, and science fairs.

### Project Learning Tree

Project Learning Tree (PLT) is an international, award-winning education curriculum designed to help all educators weave the environment into their everyday lesson plans. Through hands-on, interdisciplinary activities, PLT helps young people learn how to think, not what to think, about environmental issues. In FY12, 84 elementary teachers, early education providers, and pre-service teachers attended a PLT workshop.



### Volunteer Corps

The volunteer corps is an organization open to the general public, by which volunteers assist staff with educational activities. For the 13th straight year, members of the Kent County Retired Seniors Volunteer Program (RSVP) at the Modern Maturity Center in Dover wrapped seedlings for the Arbor Day Free Seedling Program. Twenty-two volunteers wrapped over 5,200 seedlings for public and private school students statewide. This project would not have been possible without volunteer help. Twelve RSVP volunteers also helped prepare over 4,000 Smokey Bear giveaway bags for the DFS Fire Prevention Program.



Volunteers from Dover's Modern Maturity Center prepared gift bags for students in the annual Smokey Bear programs.

### Other Highlights

- The Delaware Forest Service administers the forestry component of the Delaware Envirothon, a statewide competition for both public and private high school students. As part of the event, staffers train team coaches and student participants and also develop forestry test materials. Sixteen teams competed in the 2012 Delaware Envirothon. The winners, Wilmington Charter School, competed in the National Canon Envirothon on July 24 in Selinsgrove, PA. The Delaware team placed 9th overall in the competition.



- The Delaware Forest Service participated in the FY12 Delaware Science Olympiad for middle and high school students. The Science Olympiad's mission is to promote and improve student interest in science and to improve the quality of K-12 science education throughout the nation.
- The Delaware Forest Service hosted the FFA Forestry CDE (Career Development Event) on June 26, 2012. Five high school teams competed in categories that included tree and tree disorder identification, map reading, compass and pacing course, and measuring trees for board foot volume. Milford High School FFA went on to represent Delaware at the 2012 National Forestry CDE in Indianapolis, Indiana.



## Training and Development

### Computer Applications

ArcGIS

### Forest Management

Pesticide Conference  
 Arborist Seminar  
 Watershed Protection Actions  
 Tree Pest Detection  
 Forest Pest ID & Reporting  
 Forest Disturbance Mapper  
 Diseases of Ornamental Plants  
 Urban Forest Strike Team  
 Invasive Insect & Diseases  
 Asian Longhorn Beetle Trapping

### Misc.

Radio Use & Programming  
 PIO Emergency Management Training  
 Advanced Defensive Driving  
 Kent County Social Media Training  
 FSF AP101

### Fire

Wildland Fire Refresher  
 Helicopter Refresher

### Personnel

Managing General Differences  
 Workplace Planning  
 Women in Leadership  
 Diversity: Food for Thought  
 HR Basics  
 Conflict Resolution  
 Human Side of Management  
 Planning & Reviewing Performances  
 Developing Others  
 Ethical Conduct in Government  
 Governor's Diversity Summit

### Safety

Chainsaw Safety





# Budget Summary

## FISCAL 2012 OPERATING BUDGET (Actual)

### General Funds

Salaries and associated costs (16.5 positions)	\$1,111,102
Contractual Services	18,100
Supplies & Materials	20,200
Energy	18,700
Travel	0
<b>General Funds Subtotal</b>	<b>\$ 1,168,102</b>

### Appropriated Special Funds

Salaries and associated costs (2.5 positions)	148,027
Capital Outlay	27,415
Contractual Services	69,366
Supplies & Materials	57,735
Energy	2,120
Travel	3,991
Revenue Refund	14
<b>Appropriated Special Funds Subtotal</b>	<b>\$ 308,668</b>

### Federally Funded Cooperative Programs (includes funds for 4 positions) \*

#### Forest Health Protection:

Forest Health Management	55,000
Forest Health Monitoring	28,000
Invasive Species (competitive grant)	90,000

#### Cooperative Fire Protection:

State Fire Assistance	132,207
Volunteer Fire Assistance	34,780

#### Cooperative Forestry:

Urban and Community Forestry	200,000
Forest Stewardship	91,400
Chesapeake Bay	36,000
Forest Legacy Administration	25,000
CRP Reimbursement (Sign ups 38 & 39)	1,406

**Federally Funded Cooperative Programs Subtotal \$ 693,793**

**Total Fiscal 2012 Budget \$ 2,170,563**

*\* These federally funded cooperative programs are provided through the U.S. Forest Service, Northeastern Area State and Private Forestry budget.*





Delaware's Urban and Community Forestry Program participated in the annual ISA Work Day held in Wilmington in partnership with the Delaware Center for Horticulture and professional tree care companies in Delaware.



Woody Owl and Forest Service Trainer-Educator Ashley Peebles appear at a school assembly to honor Blades Elementary as Delaware's first Tree-riffic School.



(Back row, from left) DSU President Harry L. Williams, DFS Educator Ashley Peebles, Rep. David Wilson, Gov. Jack Markell, Rep. Harvey Kenton, and State Forester Michael Valenti with winners of the school poster contest.



(From left) Lt. Gov. Matt Denn, DFS Community Relations Officer John Petersen, and Gov. Jack Markell at the statewide employee recognition event. Petersen was named the 2011 DDA Employee of the Year.

Below, Delaware's Kesha Braunskill (on left) and Taryn Davidson gathered data on New Castle County's tree canopy and invasive species for the U.S. Forest Service.



Delaware's Marcia Fox (back row, third from right), Kesha Braunskill and Taryn Davidson (front row, first and second from right, respectively) were part of the 2012 Urban Forest Effects (UFORE) Study sponsored by the U.S. Forest Service's Philadelphia Field Station. Delaware's team helped gather data from New Castle County to measure the effects of urban trees on the environment.



# Delaware Forest Service

Visit us on the web at:  
<http://dda.delaware.gov/forestry>

## ***Our branches are here for you!***

### **1-800-282-8685 (Delaware Only)**

Forest Service Headquarters (Dover)	302-698-4500
Forestland Preservation	302-698-4548
Urban and Community Forestry Urban Forestry Grant Program Technical Assistance	302-943-7869
Blackbird State Forest (New Castle Co.)	302-653-6505
Redden State Forest (Sussex Co.)	302-856-2893
Forest Health Specialist Insect and Disease Identification	302-698-4553
Educational Programs Smokey Bear Project Learning Tree Speakers Bureau	302-698-4551
Wildfire Protection Program Wildfire Hazard Mitigation Grants Volunteer Fire Assistance Fire Classes Fire Crew	302-698-4548
Landowner Assistance Program Forest Stewardship Planning Cost-Share Assistance Watershed Protection	302-856-2893
Community Relations Program	302-698-4552



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