



# **N.C. DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES**



## **NORTH CAROLINA FOREST SERVICE**



### **DuPont State Recreational Forest Fiscal Year 2016 Legislative Report**

October 1, 2016

Agriculture Commissioner Steve Troxler

Assistant Commissioner Scott Bissette

Pursuant to G.S. 106-887 (i), the North Carolina Department of Agriculture and Consumer Services and the North Carolina Forest Service respectfully submits this annual report for DuPont State Recreational Forest.

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## Statutory Requirement

G.S. 106-887 (i) The Department shall report no later than October 1 of each year to the Joint Legislative Commission on Governmental Operations, the House and Senate Appropriations Subcommittees on Natural and Economic Resources, the Fiscal Research Division, and the Environmental Review Commission on the Department's management activities at DuPont State Recreational Forest during the preceding fiscal year and plans for management of DuPont State Recreational Forest for the upcoming fiscal year. (2011-145, s. 13.25(o).)

## Overview of DuPont State Recreational Forest

The N.C. Forest Service (NCFS) DuPont State Recreational Forest (DSRF) contains 10,473 acres in Transylvania and Henderson Counties. DSRF is managed for natural resource preservation, scenic enjoyment, and recreational purposes, including horseback riding, hiking, bicycling, hunting, and fishing. DSRF provides an exemplary model of scientifically sound, ecologically based natural resource management for the social and economic benefit of the forest's diverse community of users. This remains consistent with the grant agreement that designates a portion of the forest as a North Carolina Nature Preserve.

It has 83 miles of multi-use roads and trails used by hikers, bikers, equestrians, dog walkers, runners, and others that enjoy outdoor recreation. There are four major waterfalls on the Little River, two waterfalls on Grassy Creek, and five mountain lakes.

DSRF is operated by eight full-time employees and give temporary employees. The DSRF Staff consists of the following positions:

- Forest Supervisor – Jason Guidry
- Assistant Forest Supervisor – Bruce MacDonald
- Facility Maintenance Supervisor – Justin Carpenter
- Management Forester – Michael Sweat
- State Forest Ranger – Eric Folk
- State Forest Ranger – Jeremy Waldrop
- Equipment Operator – Robert Pace
- Office Manager – Lillian Birchfield
- Maintenance Mechanic (Temporary) – Buck Jones
- Visitor Center Manager (Temporary) – Bob Twomey
- Public Information Assistant (Temporary) – Denver Beddingfield
- Housekeepers (Temporary) – Edna Hensley and Mary Ann Hamilton

The DSRF Forest Supervisor oversees the operations of Holmes Education State Forest in Henderson County, which has two employees. The DSRF Forest Supervisor reports to the Regional Forester, Greg Yates, who is based in the NCFS Regional Office in Asheville.

The DSRF coordinates its operations with the DSRF Advisory Committee, which is a group of stakeholders representing a variety of user groups, including the Friends of DuPont

Forest and local governments. Committee members are appointed by the Assistant Commissioner Scott Bissette and typically serve three-year terms.

### **The Aleen Steinberg Center (ASC)**

The ASC, also referred to as the Visitor Center, is one the most important visitor stops at the DSRF, where trail maps, directions to waterfalls, permits for vehicles for limited-mobility visitors, and picnic shelter reservations can be obtained. Approximately 260,000 visitors have utilized the center since its opening in July of 2013. The Visitor Center's classroom has become a convenient and important meeting space for classes and meetings by various groups. In FY16, approximately 730 people utilized the classroom for an estimated 140 hours of use. The Welcome Center Manager has recruited and trained a core group of 55 volunteers to greet visitors and provide information.

### **DSRF Volunteers**

The DSRF relies on volunteer contributions to many aspects of its operations ranging from trail maintenance, facility maintenance, staffing the information desk at the Visitor Center, and various administrative functions. Over 3,920 hours of volunteer service were contributed to DSRF in FY16. Leading volunteer organizations are Friends of DuPont Forest (FODF), DSRF regular volunteers, Southern Off-Road Bikers (SORBA), Western Piedmont Community College (WPCC), and the Pisgah Trail Blazers (an equestrian group).

The DSRF staff works closely with many individuals and volunteer groups to increase accomplishments and save the State of North Carolina tens of thousands of dollars each year.

### **Holmes Educational State Forest (HESF)**

HESF is managed as part of the DSRF and carries out the teaching and promotion of forest resources as part of the NCFS mission. Historically, HESF has been the third most visited Educational State Forest in North Carolina. The HESF is staffed by two NCFS Rangers, who provide educational programs to schools and other groups from March through November. The HESF staff maintains the facilities and trails at the Forest with assistance from the DSRF maintenance staff. They also maintain a picnic area and group campground.

Below are the accomplishments for HESF for Fiscal Year 2016.

- 1,674 students in organized groups
- 32272 individual visitors
- 1,271 campers using group camp
- 36,098 in total attendance
- 74 correlated classes
- 64 other classes
- 213 total classes
- 1,674 on-site students taught
- 1164 off-site students taught

- 157 total teaching hours

## Public Use of DSRF

### Visitors

Visitation increased dramatically in FY16, continuing a five-year trend of visits well above historical averages and corresponding with the N.C. Forest Service transfer from the Department of Environmental Quality to the Department of Agriculture and Consumer Services (see Figure 1 below).

The waterfalls of the DSRF continue to be the main attraction, accounting for an estimated 87% of the visitors' primary attraction to the Forest. The increased use of the Forest is a benefit to local economies, as well as offering a healthy social benefit to North Carolina's citizens. As with any growing endeavor, the challenges to maintain a safe and clean environment at the Forest and protect the natural resources have increased proportionally to the Forest visitation.

While DuPont State Recreational Forest does not advertise itself explicitly as a destination, the neighboring communities in Transylvania, Henderson, and Buncombe Counties often tout the Forest as a "must-see" in their tourism development programs. Similarly, Visit North Carolina ([www.visitnc.com](http://www.visitnc.com)) has DSRF among many of their recommended destinations in the State and has filmed a promotional video on the State Forest.

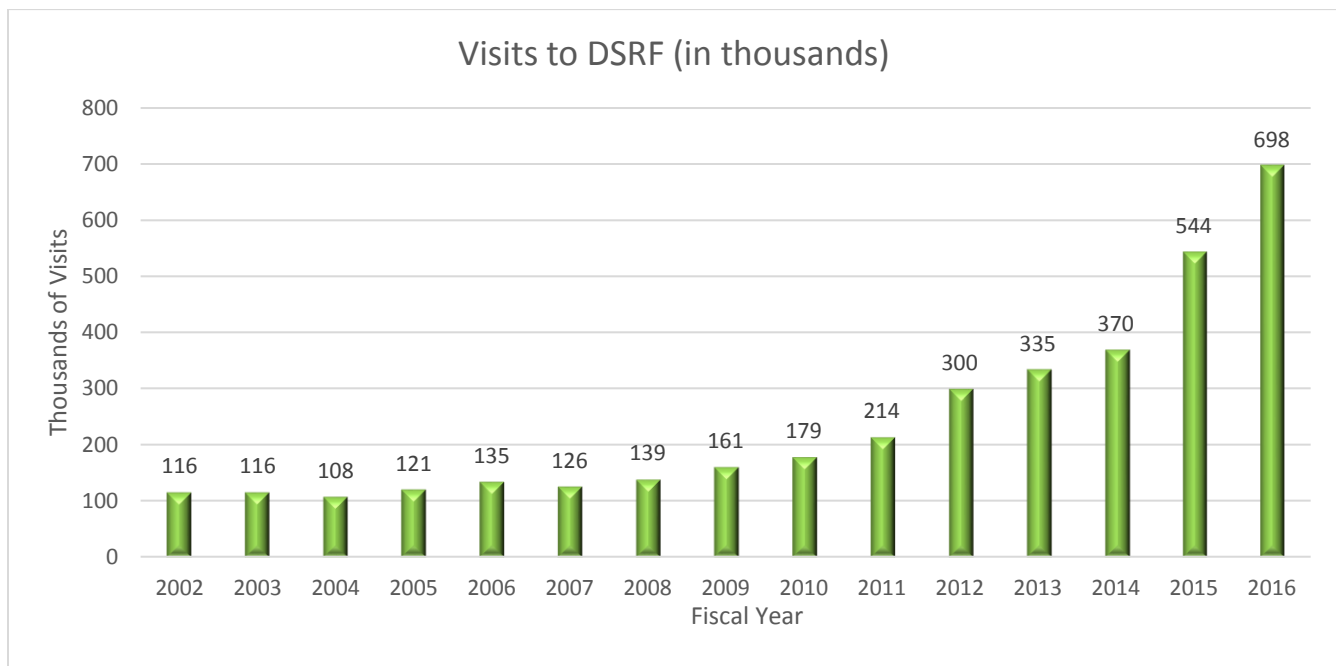


Figure 1. Visits to DSRF per Fiscal Year

Public safety and natural resource protection challenges accompany the increase of visitors, including the following issues:

1. Increased Forest Rule violations (rock climbing, swimming above waterfalls, etc.).
2. Restroom facilities beyond capacity during peak visitation.
3. Social trails created by users that destroy vegetation and accelerate erosion.
4. Parking by visitors in unsafe areas (i.e., along Staton Road).
5. Littering (trash dumping and micro-litter).
6. Vandalism (at shelters, trail signs, etc.).
7. Alcohol and illegal drug use on Forest.

### Incidents involving the Public

DSRF staff and local emergency personnel respond to various emergency incidents in the Forest. Incidents may involve trauma, illness, search and rescue, theft, Forest Rule violations, and assists with visitors that extend beyond routine actions by a DSRF Ranger. The number of incidents requiring DSRF Ranger response has increased as visitation has increased (see Figure 2).

A summary of incident types:

- Trauma/Severe Injury – 30
- Assists (i.e., transport of elderly, vehicle trouble, disabled visitors, etc.) – 31
- Forest Rule Enforcement – 17
- Routine Medical or First Aid – 12
- Search and Rescue – 12

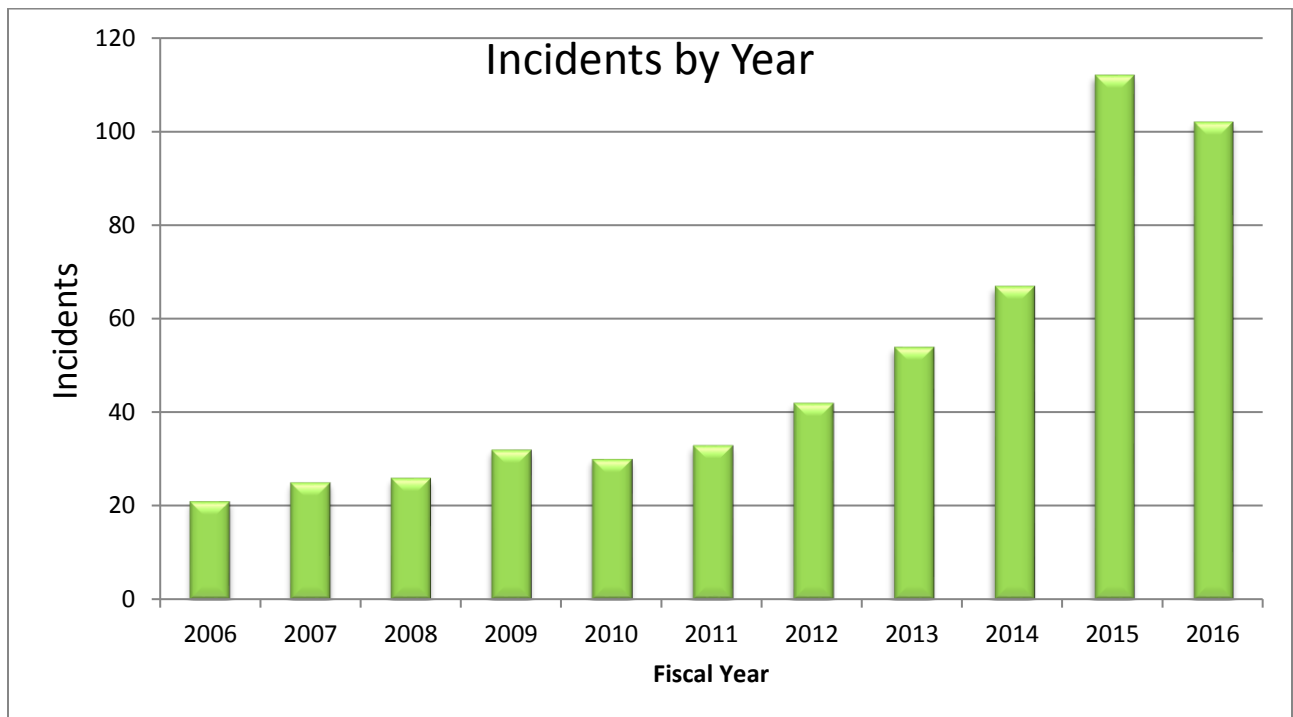


Figure 2- Public Incidents per Fiscal Year



In addition to emergency and urgent responses, the high visitation has resulted in more infractions of Forest Rules, such as Animals at Large, Disorderly Conduct, and Intoxicating Beverages, for example. Figure 3 illustrates the upward trend in Warning Tickets issued since Fiscal Year 2013.

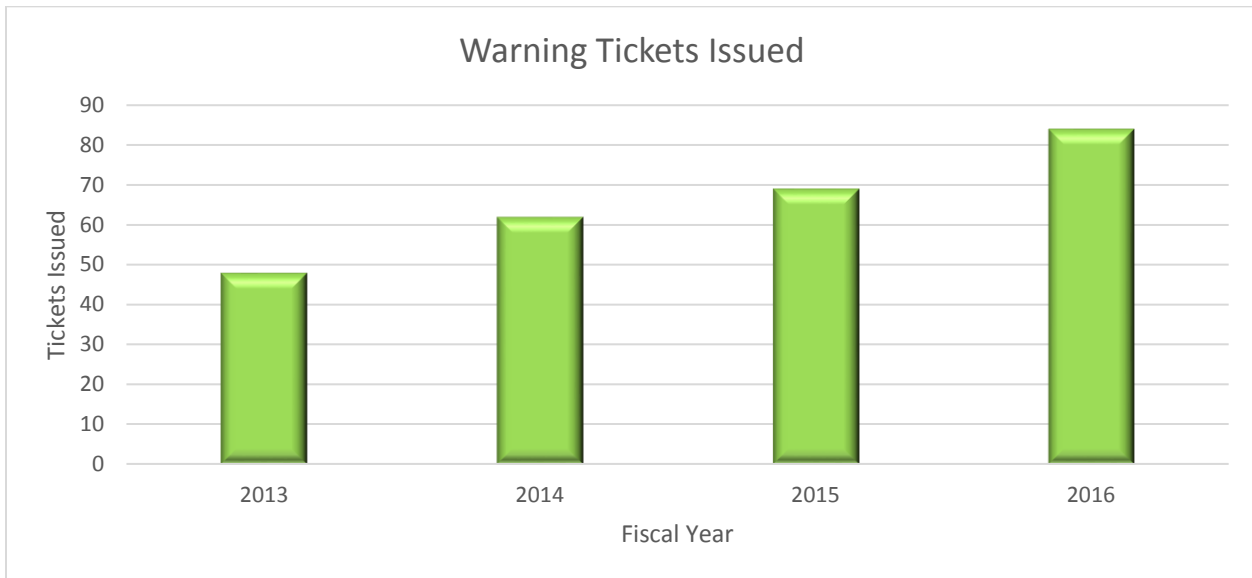


Figure 3- Warning Tickets Issued on DSRF

To ensure public safety and adequate emergency response the DSRF is staffed seven days per week, as well as having Rangers assume on-call schedules after normal working hours.

## Public Access: Permits and Reservation Accommodations

The DSRF permit programs exist to accommodate certain uses that are typically excluded by the DSRF Administrative Rules (02 NCAC 60B .1001-.1032). Each permit request is evaluated by a DSRF Ranger to determine impacts to the Forest's natural resources, road and trail system, and fellow users. Some permits, such as Commercial Use, have fees associated with levels of use, while visitors with limited mobility may obtain a vehicle pass free of charge.

Table 1: Permits Issued FY16

Permit Type	Permit Use	# Issued
Commercial Use	For camps and businesses using the Forest for a commercial use	62
Special Use	Disabled hunters, disabled anglers, equestrian facility rental, research permits	90
After-Hours	Legitimate trail use after 10 p.m. and before 5 a.m.	39
Limited Mobility Visitor	Access to High Falls, Triple Falls, and the Covered Bridge	83
Picnic Shelter	Picnic shelters at High Falls, Triple Falls, Lake Dense, and Guion Farm	40
Supervisor Level	Film production, research permits, training by military (U.S. Army, U.S. Air Force, U.S. Marine Corps), the DuPont Rescue Experience	4



## **Land and Resource Management**

Per the DSRF Land and Resource Management Plan, reviewed by various natural resource agencies and the DSRF Advisory Committee, management of multiple forest resources for the benefit of our citizens remains a high priority for the NCFS and the N.C. Department of Agriculture and Consumer Services.

### **Wildlife Habitat Improvement and Timber Production**

The active management of DSRF's timber resources and the forest plant communities progressed in FY16. As with the other public service programs, forest management has the challenge of interfacing with the public's needs and public safety. The demonstration of various management techniques to achieve wildlife habitat and forest diversity objectives can be a powerful tool for the N.C. Forest Service in furthering its mission.

DSRF conducted a hardwood shelterwood harvest on approximately 46 acres in the Sheep Mountain area (Transylvania County). This goal of this treatment was to select for mast-producing hardwood species such as northern red oak, white oak, and black oak by opening up gaps in the forest canopy through the removal of trees known to have lesser wildlife food value, such as red maple, white pine, and yellow-poplar. The structural changes to the mixed hardwood and pine stand should allow for a younger class of trees, as well as more herbaceous plant species, to develop under the overstory trees left in place. Such structure is known to benefit multiple wildlife games and non-game species in southeastern Appalachian forest communities.

On the Henderson County side of DSRF, our staff coordinated a 25-acre clearcut in a predominantly white pine stand. The clearcut treatment was intended to change the plant community over to a mixed pine and hardwood ecotype that will include shortleaf pine. Shortleaf will be planted on the tract in the spring of 2017 at such a density to allow for hardwood species to also propagate into the stand. The establishment and restoration of shortleaf pine communities on suitable sites is a primary objective within the DSRF Land and Resource Management Plan.

A thinning operation was completed in the Guion Management Area in December of 2015, near Buck Forest Road and Thomas Cemetery. Approximately 88 acres of nearly 40 year-old white pine plantation was reduced in density by approximately 40%. The thinning is the first step of a restoration effort to convert a white pine plantation to a more ecologically appropriate mixed hardwood and pitch pine community. This restoration area is identified as the Dry Branch Watershed in the dedication document that created the DuPont Dedicated Nature Preserve in 2002. The Natural Heritage Program provided close coordination during the planning of the thinning. The site will be allowed to develop as understory regeneration is spurred by increased sunlight into the stand. Prescribed burning may use in the area within a few years to continue to promote plant diversity.

All 2016 timber sales were awarded to the Parton Timber Company in Rutherford County, primarily due to their competitive pricing for white pine sawtimber. Proceeds from all timber sales were used in the DSRF operational budget for Fiscal Year 2016. Figure 3

illustrates the areas where timber was harvested since 2011, with a total of six individual sales.

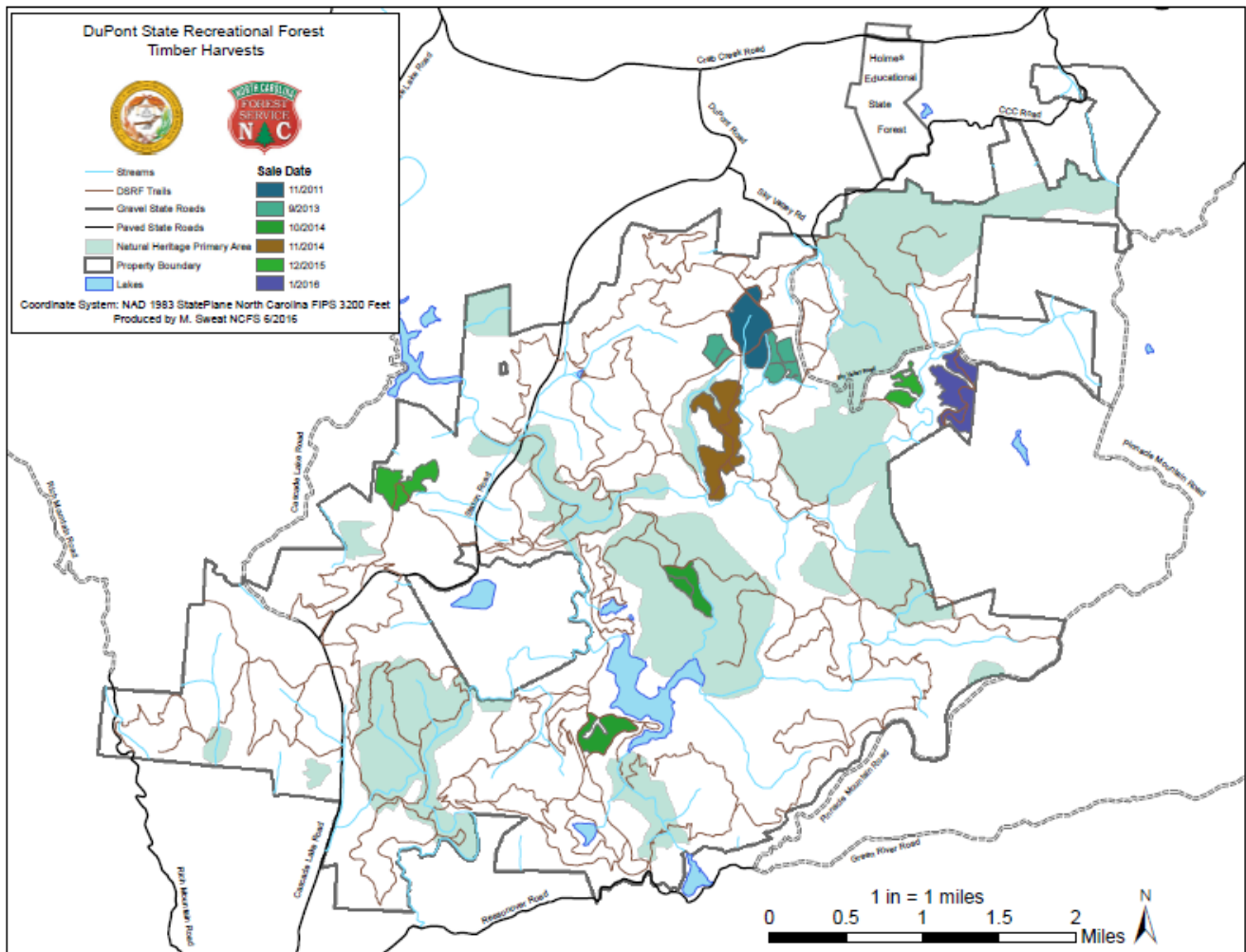


Figure 3- Timber Harvests on DSRF since 2011

## NC Wildlife Resource Commission Programming

In cooperation with the N.C. Wildlife Resources Commission (NCWRC) Game Lands program, the DSRF helps to maintain wildlife food plots, assist with wildlife law enforcement, and encourage wildlife education programming. The NCWRC issues seasonal hunting permits through a lottery system for various game species, while the DSRF provides access for disabled hunters and anglers. The NCWRC maintains nine wildlife food plots throughout the Forest by planting high-quality forage and maintaining edge habitat for game species. In spite of increasing visitation to DSRF over the last three years, deer harvest number have remained relatively steady but with a slight downward trend (Figure 3.). It is anticipated that DSRF forest management activities will result in increased populations for deer, other game species, and non-game species.

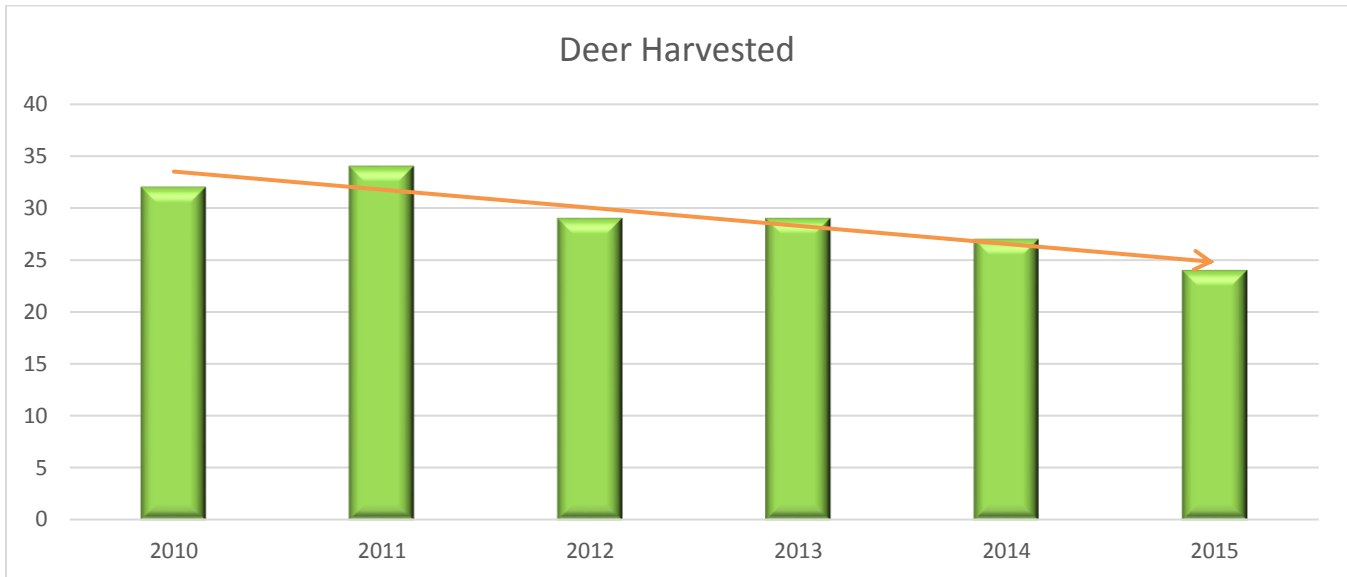


Figure 4- Deer Harvest at DSRF (data provided by the NCWRC)

The NCWRC, through the Pisgah Center for Wildlife Education, also hosted 34 fishing programs at Lake Julia, Lake Imaging, and the Little River, providing education for 457 school-age and adult participants.

### **Prescribed Burning**

In late-March and early-April, the NCFS completed approximately 420 acres of controlled burning in the understory of the following units: Cedar Rock – 113 acres; Grassy Dam Trail – 32 acres; Twin Oaks Trail – 38; and Little Grassy Mountain – 237 acres.

The total number of acres burned exceeded any previous year at DSRF. Over the last three years almost 8% of the forest's acreage has been treated with prescribed burning. These projects were visible to the public and provided numerous opportunities to educate our visitors to the benefits of controlled burning, such as reducing fuel loading to prevent severe wildfires and enhancing wildlife habitat. The upward trend in burning is dependent on weather conditions and how many N.C. Forest Service resources are committed to wildland fire control in western North Carolina. By nature, some years will be more favorable than burning than others.

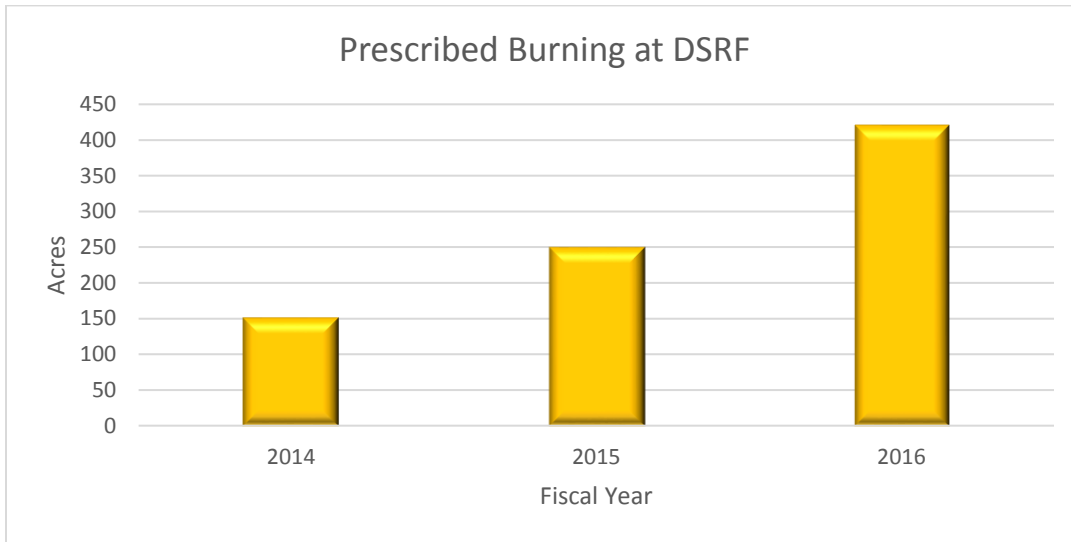


Figure 5 – Prescribed Burning Projects on DSRF

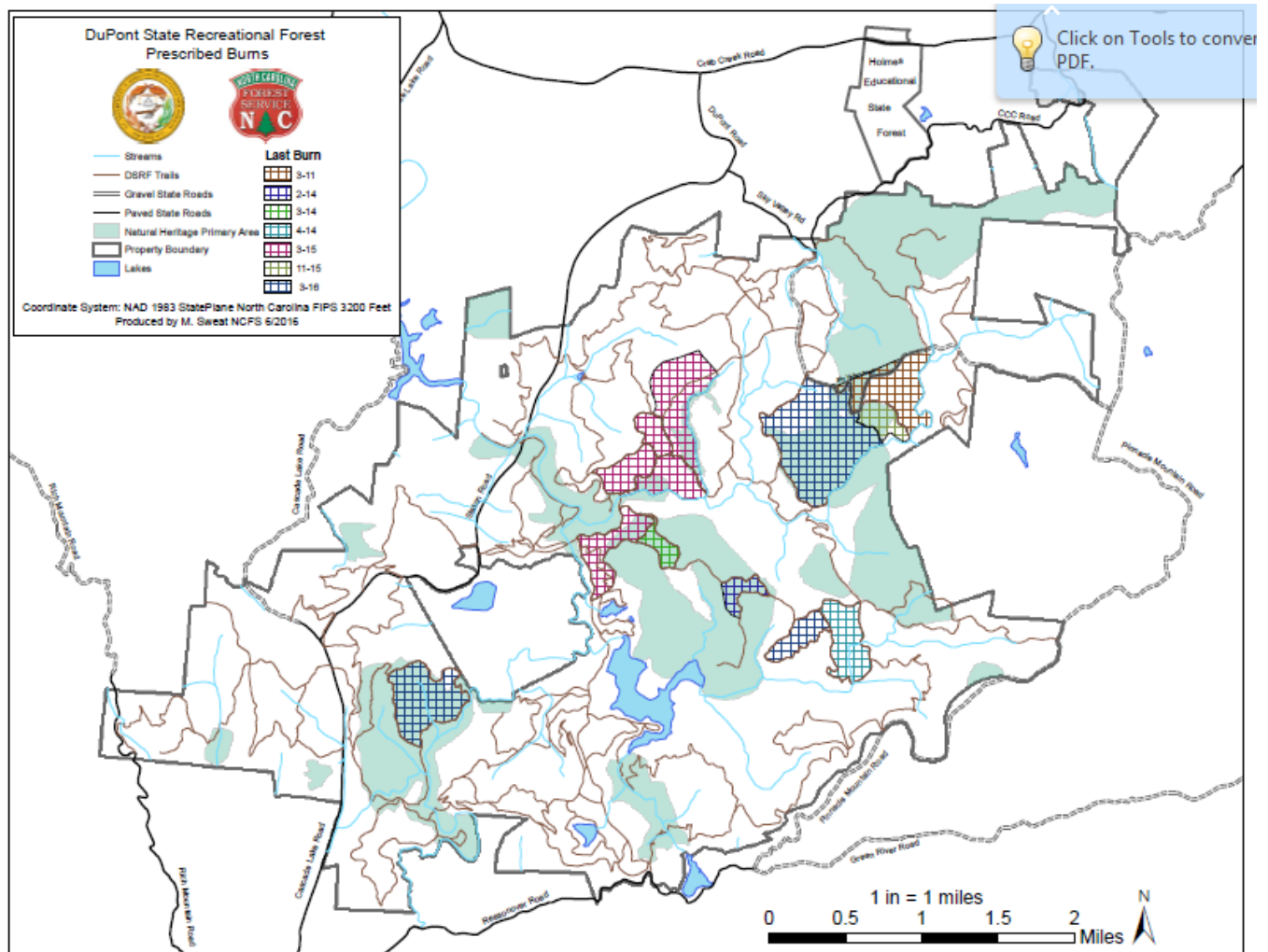


Figure 6- Prescribed Burn Areas on DSRF since 2011

## Management of the Hemlock Woolly Adelgid (HWA)

The Hemlock Restoration Initiative (HRI), a program administered by WNC Communities ([www.wnccommunities.org](http://www.wnccommunities.org)) and funded by the N.C. Department of Agriculture and Consumer Services, became a valuable partner in DSRF efforts to restore eastern and Carolina hemlocks. The HRI provided support with staff and volunteers to nearly double the amount of hemlocks usually treated annually on DSRF, nearly 400 trees in 2016. This opportunity to increase DSRF capacity to mitigate HWA destruction may open up research opportunities to lay the groundwork for future HWA management strategies. Since 2007, DSRF has applied chemical treatments to over 900 hemlock trees that have been effective against tree mortality. The focus of these treatments has been on saving trees near highly visited trails, roads, and waterfalls that would have posed more of a public safety issue if they would have died and had the potential to fall near areas frequented by visitors. Figure 7 below illustrates the areas of treatment through FY16.

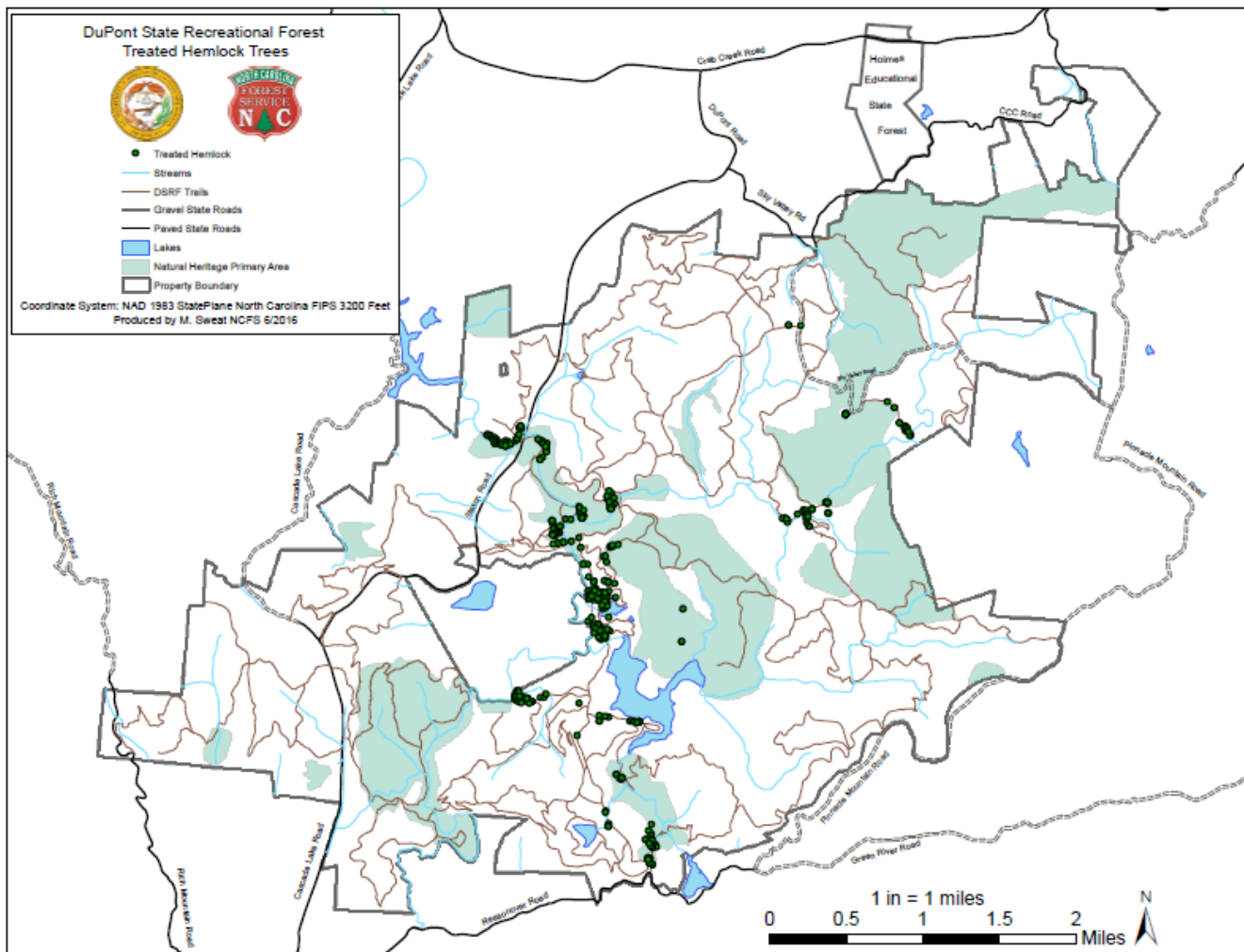


Figure 7- Areas of Hemlock Chemical Treatment and Survival

## Plans for Fiscal Year 2017

### Capital Improvements

In July of 2016, the North Carolina Legislature appropriated \$3 million for infrastructure improvements at DSRF. Plans are to design and construct new restroom facilities at various access areas, improve the surfaces and flow of parking lots, and install related utilities.

The design phase for a new restroom facility at the Hooker Falls Access Area is underway and construction is expected to start in the latter part of FY17.

### Additional Personnel

In addition to capital improvement funding, DSRF was appropriated \$629,335 for the creation and support of nine new full-time positions. All of the positions are expected to be hired in FY17. The current plan for these positions follows:

Assistant Forest Supervisor – Provides support for implementing the DSRF Master Plan, environmental regulations pertaining to new land acquisitions such as the DuPont Corporation property, and other administrative programs.

Law Enforcement Supervisor – Senior law enforcement officer for DSRF. Supervises Law Enforcement Agents and implements the DSRF law enforcement program.

Law Enforcement Agents – Provides patrol of trails, perimeter, and waterfalls and enhancing the DSRF law enforcement program.

Parks and Recreation Consultant – Provides recreational planning and programming.

Educational Ranger – Integrates the functions of the Aileen Steinberg Center and provides educational programming on DSRF.

Administrative Associate – Assists with all administrative functions for a 22-person work-unit.

Mechanic – Provides for the maintenance and safe operations of a fleet of 32 vehicles.

Maintenance Mechanic – to ensure facilities are maintained for longevity and are safe for employees and the public.

### Land Acquisition

Over the last three fiscal years, DSRF has experienced numerous and positive changes in its course of operations and master planning. Every year brings new opportunities to improve the public service that DSRF has delivered to over 3.6 million visitors since becoming a public land in the year 2000. The future of DSRF is bright with the possible addition of the 476 acres currently owned by the DuPont Corporation, thereby extending and enhancing the Forest's offerings of outdoor recreation, natural resource management, and environmental education.

## CONTACT INFORMATION

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