



N.C. DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES



NORTH CAROLINA FOREST SERVICE



ANNUAL LEGISLATIVE REPORT ON DUPONT STATE RECREATIONAL FOREST

October 1, 2020

Steve Troxler, Commissioner
Scott Bissette, Assistant Commissioner
David Lane, State Forester

Pursuant to G.S. 106-887 (i), the North Carolina Forest Service, a division of the North Carolina Department of Agriculture and Consumer Services, respectfully submits this annual report on DuPont State Recreational Forest for fiscal year 2020.

Contents

STATUTORY REQUIREMENT	3
OVERVIEW OF DUPONT STATE RECREATIONAL FOREST	3
The Aleen Steinberg Center	4
PUBLIC USE OF THE FOREST: Operations during the COVID-19 pandemic	4
Limiting Roadside Parking on Staton Road – natural resource protection and enhancing public safety	6
Natural Resource Protection – less litter impacts	7
Public Safety – fewer emergency incidents	8
Permit Programs – managing public use of DSRF	10
Promoting Forest Resources – changes in educational opportunities	12
MANAGING FOREST RESOURCES: a continued focus on wildlife habitat improvements ...	12
IMPROVING FOREST INFRASTRUCTURE: remediation and capital projects	15
The former DuPont de Chemours Corporation plant site	15
N.C. Parks and Recreation Trust Fund Projects (PARTF)	16
Old Camp Summit Cabin – repair and renovation	17
Ranger Headquarters at Lake Julia Office – repair and renovation	17
Hooker Falls Trail – relocation and repair	18
Forest Trails and Roads – repair and renovation materials	19
PLANS FOR FISCAL YEAR 2021	21
Continuing capital improvements: new bathroom and parking facilities	21
Managing Forest Resources: continuing work from 2012	21
CONTACT INFORMATION	23

STATUTORY REQUIREMENT

No later than Oct. 1 of each year, the Department shall report 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

DuPont State Recreational Forest (DSRF) contains 12,489 acres in Transylvania and Henderson counties. The forest is managed for natural resource conservation, scenic enjoyment and recreational purposes, including horseback riding, hiking, bicycling, hunting, fishing and other outdoor recreational activities that are compatible with natural resource protection. The N.C. Forest Service and DSRF staff strive to provide an exemplary model of scientifically sound, ecologically based natural resource management to socially and economically benefit of a diverse community of users. DSRF is also required to protect and restore natural areas to meet the intent of a grant agreement that designates over 60% of the state forest as a dedicated nature preserve.

DSRF has nearly 60 miles of multiuse trails and more than 40 miles of multiuse roads that connect the forest's recreational system and scenic features. There are four waterfalls on the Little River, two waterfalls in the Grassy Creek watershed and six mountain lakes.

State forest operations are conducted by 19 full-time employees and four temporary employees. DSRF staff consisted of the following positions for fiscal year 2020:

- Forest supervisor: Jason Guidry
- Assistant forest supervisor: Michael Santucci
- Office manager: Kimberly Watson
- Administrative associate: Sarah Patton
- Management forester: Wesley Sketo
- Forestry technician: Jeremy Waldrop
- Recreation specialist: Vacant
- Recreation technician: Eric Folk
- Firefighting equipment operator: Jimmy Patterson
- Facility maintenance supervisor: Justin Carpenter
- Mechanic: Nathan Sweat
- Maintenance technician: Buck Jones
- Maintenance technician (temporary): Bob Twomey
- Housekeepers (temporary): Edna Hensley and Mary Ann Hamilton
- Communications director: Vacant
- Visitor center manager (temporary): Jane Dauster
- Holmes Educational State Forest supervisor: Susan Fay
- Educational ranger: Amy Kinsella

- Educational ranger: EJ Dwigans
- Lead law enforcement agent: Andy Norman
- Law enforcement agent: Daniel Britt
- Law enforcement agent: Anthony Owen

The DSRF forest supervisor also supports the operation of Holmes Educational State Forest (HESF), which has three employees, in Henderson County. The DSRF forest supervisor reports to the Mountain Division director, Greg Smith, who is based in the North Carolina Forest Service (NCFS) regional office in Asheville.

Forest planning and management are coordinated with the DSRF advisory committee, a group of stakeholders representing a variety of user groups, including hunters, conservationists, the youth camp industry, 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

The Aleen Steinberg Center, also referred to as the Visitor Center, is where visitors can obtain trail maps, directions and check-in for limited-mobility vehicle permits and picnic shelter reservations. Approximately 78,000 visitors used the Visitor Center facilities in fiscal year 2020. There are 50 volunteers that work at the Visitor Center to provide safety and directional information.

PUBLIC USE OF THE FOREST: Operations during the COVID-19 pandemic

On March 25, 2020, as North Carolina and surrounding states were implementing restrictions on large gatherings, DSRF closed to the public as part a statewide effort to reduce the spread of the novel coronavirus. The closure operation was complex and precedent-setting because of the number of people that visit DSRF during the spring months between March and May (an average of 124,000 people annually since 2015). During the period of closure, visitors continued to arrive at DSRF expecting to gain access. Despite widespread public information and updated online messaging, many visitors remained unaware of the forest closure. N.C. Forest Service and DSRF staff increased on-site presence to enforce the closure and to inform visitors about alternative sites to visit. The Friends of DuPont Forest also assisted with public information distribution within their membership and on social media platforms.

The forest closure involved limiting roadside parking along Staton Road near the popular waterfall corridor; the deployment of LED message boards along highways leading to DSRF; and, the installation of vehicle barriers at all access areas. These measures were effective in preventing large groups of visitors from entering the forest, thereby avoiding potential confrontations with forest staff and reducing the need for punitive enforcement actions.

Even after nearly 60 days of being closed to the public, DSRF visitation reached its second highest level of annual visitors during the fiscal year (Figure 1). This level was reached by unprecedented demand for outdoor experiences during the COVID-19 pandemic, which was recommended by many public health organizations as a low risk activity for people, contingent upon the practices of physical distancing, handwashing and face coverings. Figure 2 illustrates the dramatic changes in use across the months of fiscal year 2020.



Figure 1. Visits to DSRF per fiscal year since 2010

**DSRF was closed to the public for nearly 60 days during FY2020 and yet still reached the second-highest annual forest visitation due to overwhelming popularity from people seeking perceivably low risk outdoor activities.*



Figure 2: Visits by month of fiscal year 2020

The forest reopened using a phased approach beginning May 14, 2020. At reopening, three primary access areas were available to the public (Guion Farm, Corn Mill Shoals and Fawn Lake). This was a strategic effort to minimize large gatherings of people who would have prolonged periods of close contact. On May 22, all DSRF's access areas opened, however the restroom facilities, picnic shelters and the interior of the Aleen Steinberg Center remained closed to the public as part of ongoing COVID-19 safety protocols. To mitigate the potential for large gatherings, the roadside parking exclusion measures were kept in place, along with two LED message boards informing visitors about limited parking and facilities.

These measures had distinct impacts to the state forest's operations, as described in the following sections.

Limiting Roadside Parking on Staton Road – natural resource protection and enhancing public safety

For the last decade, visitors have parked on the shoulders of Staton Road, a state highway that connects the Lake Imaging, Hooker Falls and High Falls access areas. On a typical summer day, there can be hundreds of vehicles using narrow roadside shoulders as overflow parking. This leads to pedestrian traffic in a busy roadway (Figures 3 and 4).

This has been identified as a public safety concern by forest staff, stakeholder groups and local residents.

Excluding the roadsides as a parking option for vehicles appeared to be effective at reducing large congregations of visitors on the forest and at mitigating much of the traffic and pedestrian congestion along the public highway. Notably, overall visitation was not affected by the roadside measure. In fact, June 2020 set a visitation record for that month of the year.

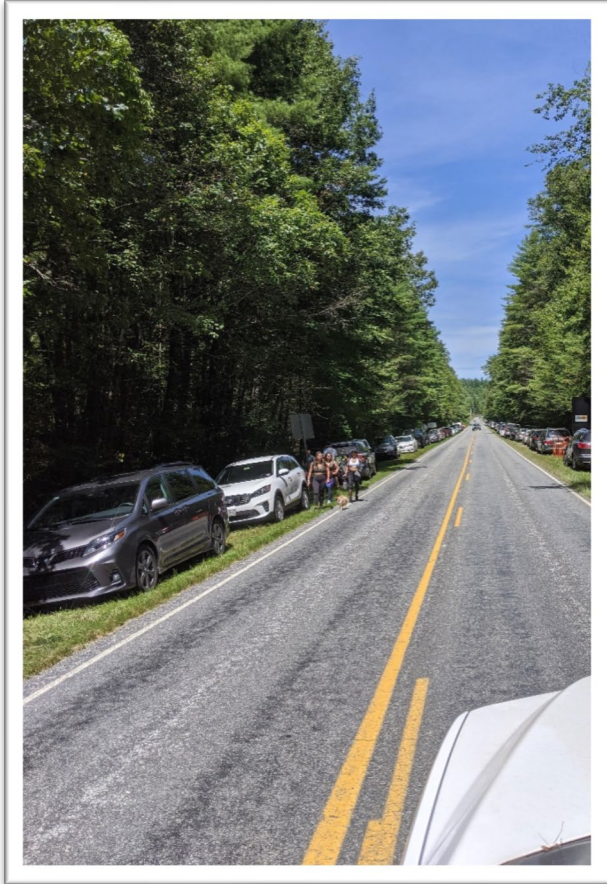


Figure 3: Roadside parking and pedestrian traffic in the roadway



Figure 4: Roadside exclusion related to COVID-19 restrictions

Natural Resource Protection – less litter impacts

The elimination of roadside parking in May and June 2020 changed the patterns of access for visitors and required more hiking to reach the waterfall attractions, especially during high-volume periods. This new dynamic appeared to lessen the natural resource damage normally observed around popular gathering areas, such as the Little River above and below Hooker Falls. While it has been noted that overall visitation increased in the final months of fiscal year 2020, this visitation was more evenly distributed over a given day, which reduced the compounding impacts of having too many visitors in a particular

location at the same time. While it remains a prevalent impact, littering by visitors appeared to be less concentrated, especially in sensitive natural areas along the Little River. A comparison of litter amounts around Hooker Falls on the same holiday weekend of 2018, 2019 and 2020 are depicted in Figure 5.



Figure 5: Comparison of trash left by visitors on holiday weekends

Public Safety – fewer emergency incidents

DSRF staff and county emergency personnel are dispatched to a variety of emergency incidents in the forest. Such incidents may involve trauma, illness, search and rescue, property damage and medical emergency evacuation. In general, emergencies can be linked to the types of risks taken by visitors. Risks can include entering restricted areas, climbing on rocks, sliding on or jumping off waterfalls, walking on wet surfaces, and the use of intoxicating substances. During periods of peak visitation, this set of behaviors can mirror as other visitors see the examples and assume the activity is either safe, legal or will not be enforced. The spreading out of visitors due to the roadside parking exclusion, coupled with more law enforcement interactions by DSRF staff, appeared to be a positive

influence on the number of incidents occurring in the state forest. Figure 6 shows this departure from previous years when overflow parking onto Staton Road was prevalent.

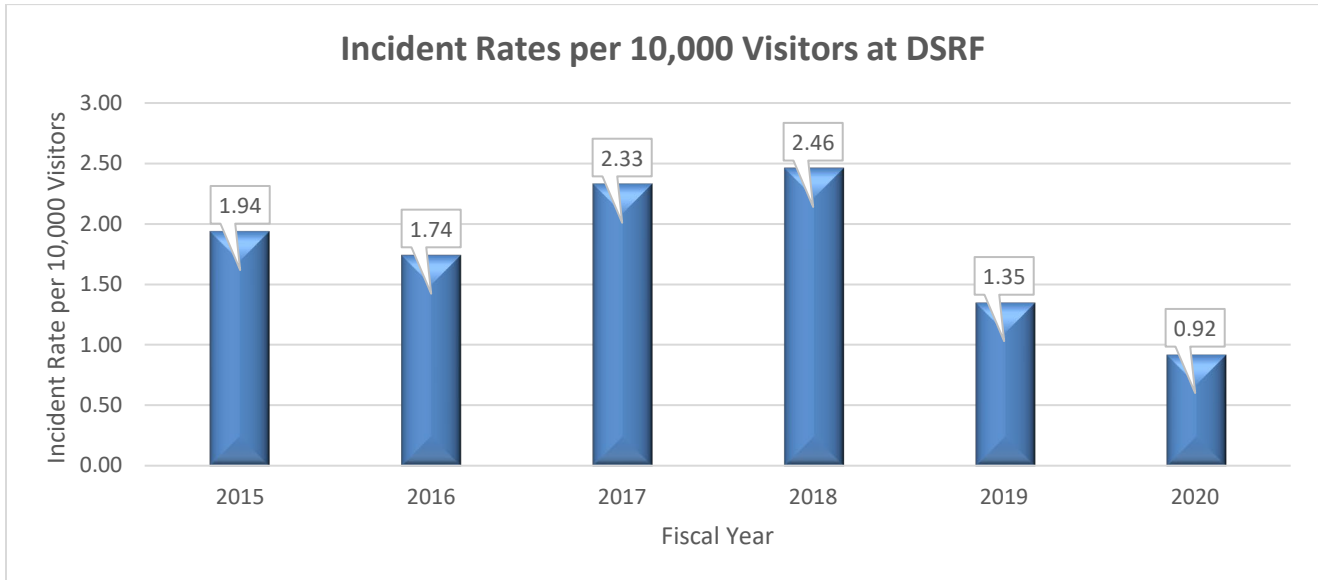


Figure 6: Visitor incident rates per fiscal year since 2015

To prevent damage to natural areas and enhance public safety, DSRF law enforcement agents and forest rangers issued more than 1,400 law enforcement actions in fiscal year 2020. This level of public engagement was nearly twice the amount documented in fiscal year 2019 when 782 actions were reported. Such actions include the issuance of citations, written warnings, verbal warnings and expulsions from the state forest. Figure 7 presents the categories of forest rule violations for the fiscal year. As noted previously, most enforcement activities were in response to potentially hazardous visitor behavior around High Falls, Triple Falls and Hooker Falls.

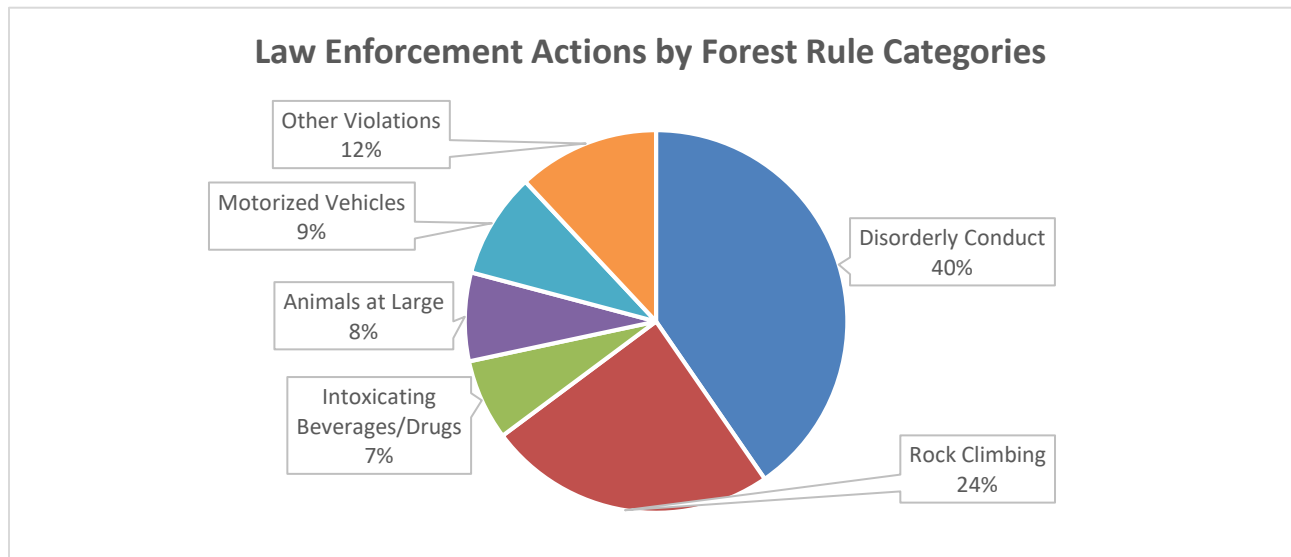


Figure 7: Categories of forest rule violations in fiscal year 2020

In addition to responding to emergencies and law enforcement incidents, DSRF staff provided a high level of customer service to the general public by providing 130 assists for needs such as finding lost animals, hasty searches for missing people and preventing emergencies. An assist is recorded for any action that is a nonemergency in nature but takes the DSRF ranger or law enforcement agent away from their normal duties.

Permit Programs – managing public use of DSRF

DSRF staff manage certain uses that are prohibited by Administrative Rules (02 NCAC 60B .1001-.1032) through the issuance of permits. Each permit request is evaluated by a DSRF ranger to determine impacts to the forest’s natural resources, road and trail system, and the general public for various uses described in Table 1.

Table 1: Permits issued in fiscal year 2020

Permit type	Permit use	Permits in fiscal year 2020	% Change from fiscal year 2019
Commercial use	For youth camps and businesses using DSRF as part of a commercial enterprise.	65	-14%
Special use	Foot race events, equestrian facility rentals and research permits.	26	0%
After-hours	Recreational trail use after 10 p.m. and before 5 a.m.	7	-65%
Limited-mobility visitors	Provides vehicular access to High Falls, Triple Falls and the Covered Bridge.	32	-42%
Picnic shelter	Picnic shelters at High Falls, Triple Falls, Lake Dense, Lake Imaging and Guion Farm.	13	-38%
Limited-mobility anglers and hunters	Vehicle access for limited mobility anglers and hunters to select areas of DSRF.	26	-7%
	Total	169	-25%

Permit and reservation programs were limited for most of the second half of the fiscal year due to the need to limit gatherings and group activities per public health guidance related to COVID-19. This was an impact to public access and to a source of reimbursements to the state that in turn supports DSRF’s operational budget.



Figure 8: Closure of High Falls shelter to mitigate large groups during COVID-19 pandemic

Overall, the forest issued 56 fewer permits than the previous fiscal year, a reduction of ~25%. This downturn influenced the projected increases of collections before the COVID-19 restrictions. In fiscal year 2019, a revised reimbursement rate for the Commercial Use program was approved by the N.C. Board of Agriculture and expected to provide additional receipt revenue in fiscal year 2020. The forest closure from mid-March to mid-May, along with continuing facility restrictions, resulted in a loss of approximately \$49,000 in projected collections. Recent collection amounts are illustrated in Figure 9.

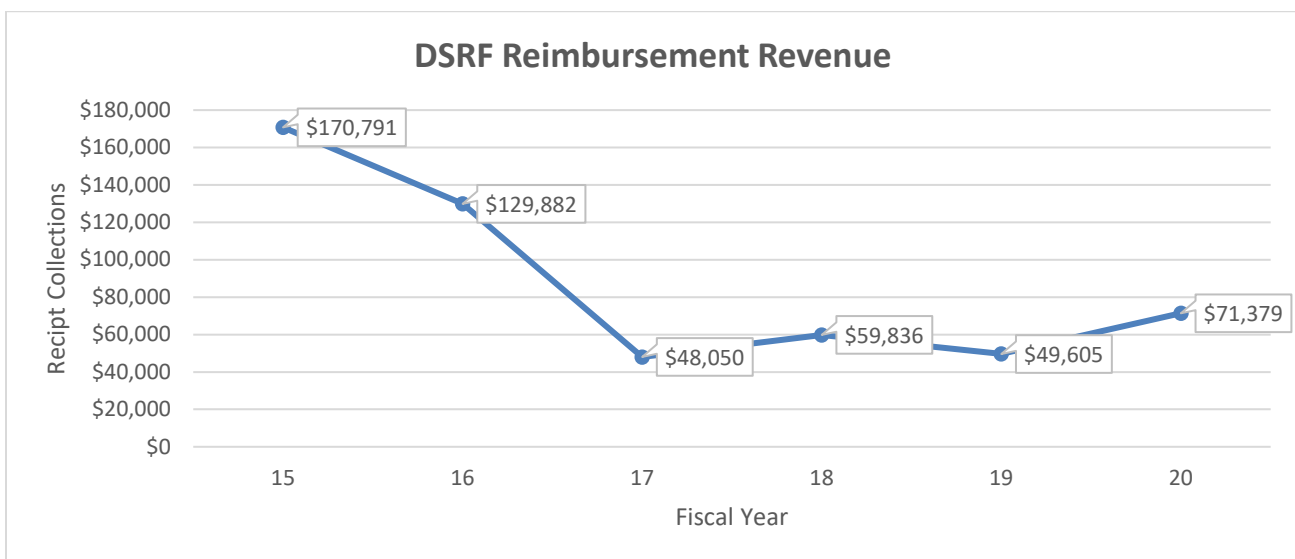


Figure 9: Receipt-based program collections since fiscal year 2015

Promoting Forest Resources – changes in educational opportunities

Unfortunately, restrictions to group activities on state forests and the limited operations of the state's school systems impacted the number of educational offerings provided in fiscal year 2020. The limitations were evident in the cancellations of school events and reservations at Holmes Educational State Forest and by the Pisgah Wildlife Education Center managed by the N.C. Wildlife Resources Commission (NCWRC). At DSRF, the increase in educational events was primarily in the earlier months of fiscal year 2020, as the Junior Ranger Program was initiated at the Aleen Steinberg Center and at the Friends of DuPont Forest's 'Forest Festival' in September 2019. These accomplishments and comparisons to fiscal year 2019 are listed in Table 2.

Table 2. Educational offerings associated with DSRF in fiscal year 2020

Presenter	Educational programs	Participants	% Change from FY 19
HESF staff	111	2,104	-61%
DSRF staff	32	1,295	+14%
N.C. Wildlife Resources Commission	10	121	-57%
Friends of DuPont Forest	13	407	-32%
Total	166	3,927	-47%

MANAGING FOREST RESOURCES: a continued focus on wildlife habitat improvements

The DSRF Land and Resource Management Plan, developed in 2011 by a multidisciplinary group of natural resource agencies and citizen stakeholder groups, guides the management of forest resources for the benefit of our citizens.

Because of this foundational planning, DSRF has developed a renowned program of forest management demonstrations balanced with the high-volume public use of a recreational trail system and popular waterfall attractions. The DSRF forest management program actively manages natural resources using mechanical (harvesting), chemical (pesticide application) and biological (prescribed fire) tools proven effective from generations of forestry research. The prime objective is to achieve multiple desired conditions within animal and plant communities that benefit our society. Figure 10 highlights the forestry demonstrations across DSRF since 2011, amounting to the creation of more than 445 acres of multiage forests and the return of more than 1,500 acres of natural fire disturbance to the forest communities.

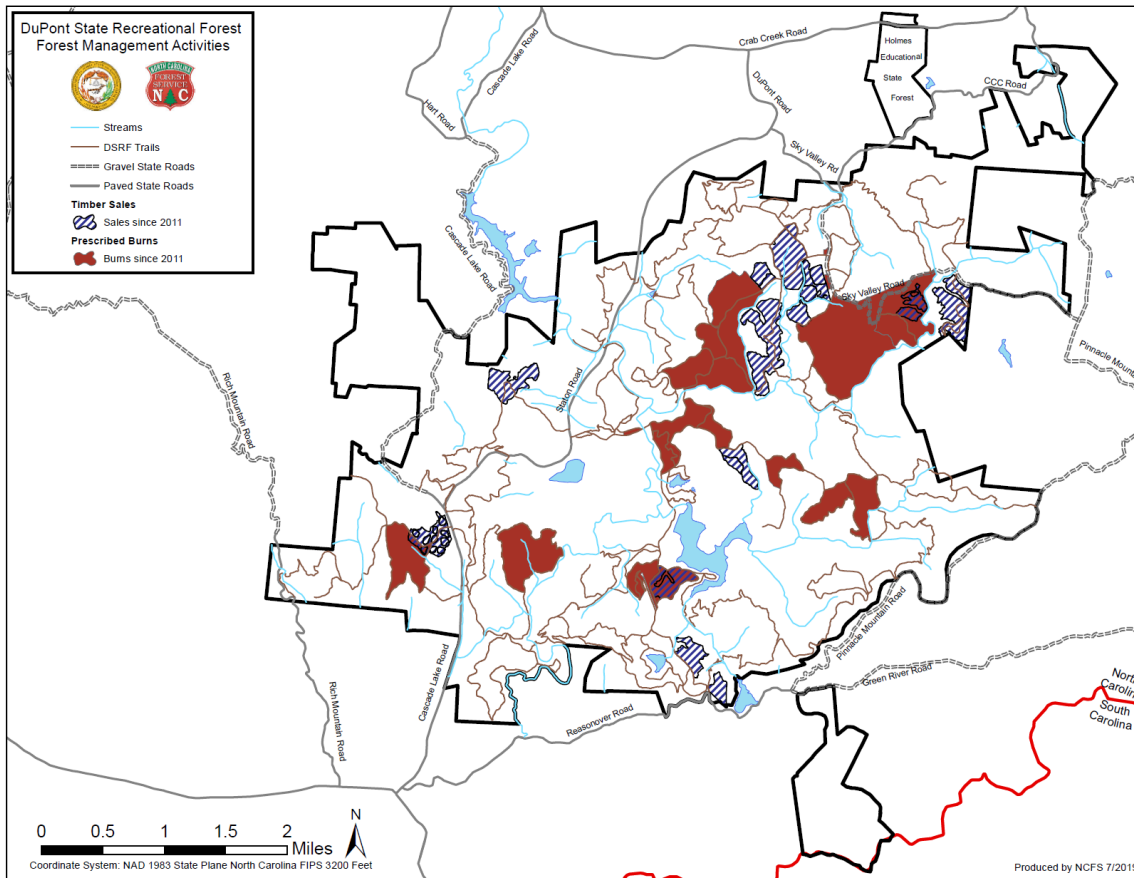


Figure 10: Forest management activities from 2011 to 2020

In fiscal year 2020, a timber harvest continued on the southern end of the forest near Reasonover Road. Harvest objectives focused on the removal of a concentration of white pine and yellow poplar behind the roadside deck location depicted in Figure 11. This forest stand had suffered ice damage over the years and was experiencing mortality due to competition and crowding between trees. Shortleaf pine will be planted across the site in certain locations, the third such planting at DSRF in recent years, contributing to the regional restoration efforts of this species. Parts of the surrounding hardwood forest were thinned to improve age distribution and species composition. Older scarlet oaks (a shorter-lived oak species) were removed, along with yellow-poplar and Fraser magnolia. Limited trail closures were needed on Conservation Road even though it was in proximity to the popular Reasonover Creek Trail. The treatment area totaled 42 acres and provided \$51,100 in timber sale funds to be used for future forest improvements.

Load of logs exiting through High Falls access area



Fawn Lake Road approaching harvest deck



Harvest deck operations near Reasonover Creek Trailhead

Figure 11: Timber operation near Reasonover Road

In cooperation with the NCWRC Game Lands program, DSRF continues to maintain wildlife food plots; assist with wildlife law enforcement; support the stocking of trout in the Little River; and, provide important hunting and fishing opportunities across the forest. The NCWRC maintains nine wildlife food plots throughout the forest by planting high-quality forage and maintaining edge habitat for game species. The NCWRC oversees seasonal hunting permits at DSRF through a lottery system for various game species, while DSRF provides vehicle permits to the forest's interior for limited-mobility hunters and anglers.

Fiscal years 2017-2020 show a period where deer harvests remained higher than in previous years (see Figure 12). While there are numerous variables related to game harvests, deer and other wildlife populations typically thrive in managed forest settings where the plant communities have variety in both structure and age. This is a principle

objective of the management of DSRF per its Land and Resource Management Plan and the planning recommendations in the NCWRC's Wildlife Action Plan.

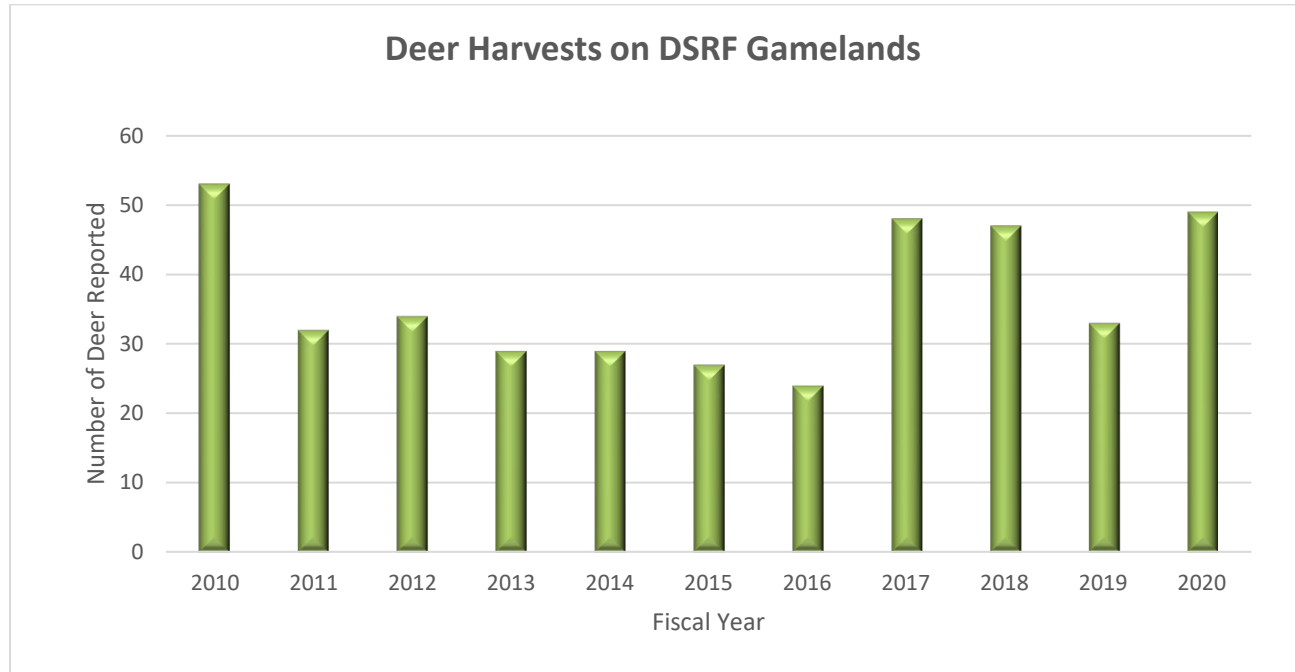


Figure 12: Deer harvest levels at DSRF since 2010

IMPROVING FOREST INFRASTRUCTURE: remediation and capital projects

The former DuPont de Chemours Corporation plant site

In December 2016, the forest acquired 476 acres previously owned and managed by the DuPont Corporation since the 1950s. Approximately 70 acres of the site were once a facility that produced silica-based computer components and X-ray film. In 2004, the facility was demolished by the DuPont de Chemours Corporation and remained as private property, often referred to as the 'Donut Hole', in the middle of the state forest.

In fiscal year 2020, progress was made to improve an existing landfill known as Solid Waste Management Unit 11(SWMU-11) and located next to the Little River and between Bridal Veil Falls and High Falls. The project involved the movement of over 70,000 cubic yards of soil to cover nearly 14 acres at a depth of 2 feet. This new 'cap' was constructed over the site and slopes were reinforced to reduce susceptibility of erosion into the Little River. (Figure 13). Per the 2016 agreement between the N.C. Department of Agriculture

and Consumer Services and the DuPont de Chemours Corporation, all remediation work on the former manufacturing facility will be the responsibility of DuPont de Chemours.



Figure 13: Solid Waste Management Unit 11 with reshaped banks and new landfill cap

N.C. Parks and Recreation Trust Fund Projects (PARTF)

In fiscal year 2017, the North Carolina General Assembly provided DSRF access to the N.C. Parks and Recreation Trust Fund for the purposes of capital improvements, repair and renovation of facilities and land acquisition. The DSRF allocations in fiscal years 2019 and 2020 were used for capital improvement projects to address resource protection and public safety issues around heavily impacted areas of the forest, including the waterfall attractions along the Little River. Table 3 provides a summary of PARTF-funded projects.

Table 3: PARTF projects during fiscal year 2020

Capital Project	Expenditures
Old Camp Summit Cabin – Repair and Renovation	\$15,350
Ranger Headquarters at Lake Julia Office – Renovation Design	\$3,150
Hooker Falls Trail – Relocation and Repair	\$63,033
Road and Trail – Repair and Renovation Materials	\$91,441
Total	\$172,974

Old Camp Summit Cabin – repair and renovation

This building has been unoccupied since its acquisition in 2000 and was once part of the Camp Summit facilities that still provide recreational benefits and office space for DSRF operations, such as the equestrian facilities near Bridal Veil Falls and the Ranger Headquarters near Lake Julia. The ~40-year old building was renovated with improvements to electrical systems, heating and cooling systems, water supply systems, and the removal of hazardous trees in proximity to the building. This facility will support the operations of DSRF’s law enforcement program.

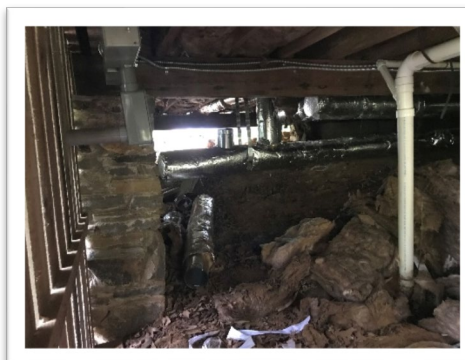


Figure 14: Old Camp Summit Cabin & HVAC repairs

Ranger Headquarters at Lake Julia Office – repair and renovation

Before state ownership, this building served as the infirmary for the summer camp operations of Camp Summit until the mid1980’s. Then it was used as an overnight lodge by the DuPont de Nemours Corporation and Sterling Diagnostic Imaging. This facility has supported DSRF forest ranger staff since the early 2000s. In 2019, mold contamination

was detected in parts of the building, making it a high priority for renovation and structural improvements. During 2020, PARTF funds were used to hire Novus Architecture for the design of the renovation project (Figure 15). The building will receive new electrical system layouts, updated heating and cooling systems, a new floorplan to support forest staff administrative and operational work, and the removal of mold throughout the structure. Remodeling construction is expected to be completed in fiscal year 2021.



Figure 15: Cover page of design drawings for the ranger headquarters

Hooker Falls Trail – relocation and repair

Since becoming state property in 2000, the primary trail to Hooker Falls was a former roadbed located in the floodplain of the Little River. This setting was problematic during rain events that would carry significant amounts of sediment into a stream system that supports fisheries and associated recreational activities. The trail condition was further impacted by foot traffic from hundreds of thousands of visitors using the Hooker Falls access area. Examples of such impacts were the trampling of riparian vegetation critical to protecting water quality and persistent littering by visitors that eventually impacted the Little River’s aquatic habitat.

DSRF forest staff located a more sustainable trail corridor to Hooker Falls and used PARTF funds for a trail contractor to construct a trail of similar length and designed to be sustainable against a high volume of foot traffic and the erosion effects of Transylvania County’s high annual precipitation. In addition to the new trail location, the project also created a new river access for visitors that lessens impacts on streambanks and offers a shorter walk to the Little River (Figure 16). The new trail and river access opened May 14, 2020 when the forest reopened after a nearly two-month closure related to COVID-19.



New Little River access for anglers



Trail construction near Hooker Falls



New trail to Hooker Falls

Figure 16: Examples of the Hooker Falls Trail improvements

Forest Trails and Roads – repair and renovation materials

Forest trails and roads at DSRF provide one of the most extensive outdoor recreational systems in North Carolina. These natural surface pathways endure traffic from bicycles, equestrians, hikers and forest ranger vehicles, along with being exposed to year-round

rainfall events that can degrade the structure of roads and trails. The maintenance of this system is continuous and requires large amounts of material and labor. In fiscal year 2020, DSRF used PARTF to purchase stockpiles of gravel, erosion control materials, and fencing for the repair and renovation of high-use trails and roads at DSRF (examples shown in Figure 17). The targeted projects include Conservation and Buck Forest Roads, Triple Falls Trail and High Falls Loop Trail, all of which provide access to the popular waterfall attractions.

Figure 17: Gravel and erosion control materials



PLANS FOR FISCAL YEAR 2021

Continuing capital improvements: new bathroom and parking facilities

A portion of the \$3 million in capital improvement appropriations from fiscal year 2017 will fund a construction project at the Guion Farm access area in Henderson County. This project will provide a new restroom facility and expanded parking area to better accommodate equestrians and other trail users. (Figure 18).

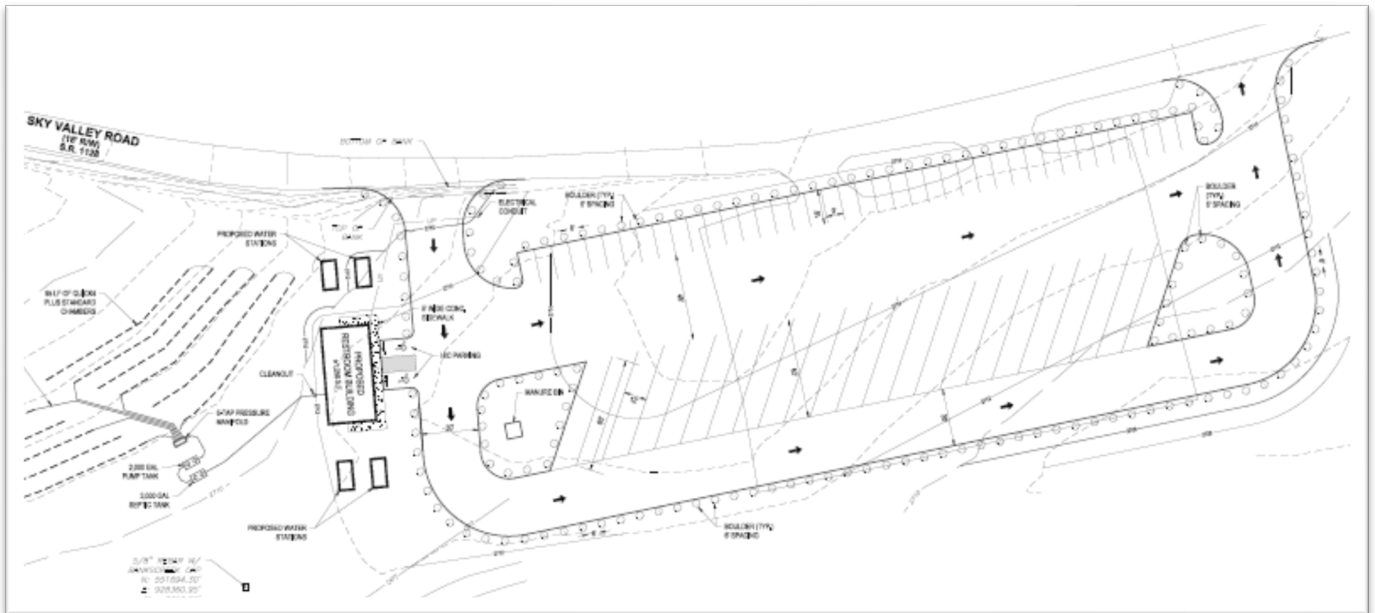


Figure 18: Design drawing for the Guion Farm access area in Henderson County

Managing Forest Resources: continuing work from 2012

A timber harvest project is planned for fiscal year 2021 near the Guion Farm access area and Hickory Mountain Road. A 12-acre site is expected to expand on a previous timber practice conducted in 2012 known as an expanding gap harvest or a 'femelschlag.' This approach will remove mature eastern white pines to widen open areas for the continued development of various oak species for improved wildlife food sources and habitat benefits, a prime objective throughout the DSRF Land and Resource Management Plan. To the north of the management unit, there will be an approximately 70-acre thinning operation in an eastern white pine stand. The objective of the thinning is to increase the forest's diversity of tree species through the growth of hardwood species in the spaces created by the harvest. The thinning will also improve the health and growth of

remaining eastern white pine, thereby increasing their value for a future harvest. Figure 19 illustrates the general locations of the timber treatments.

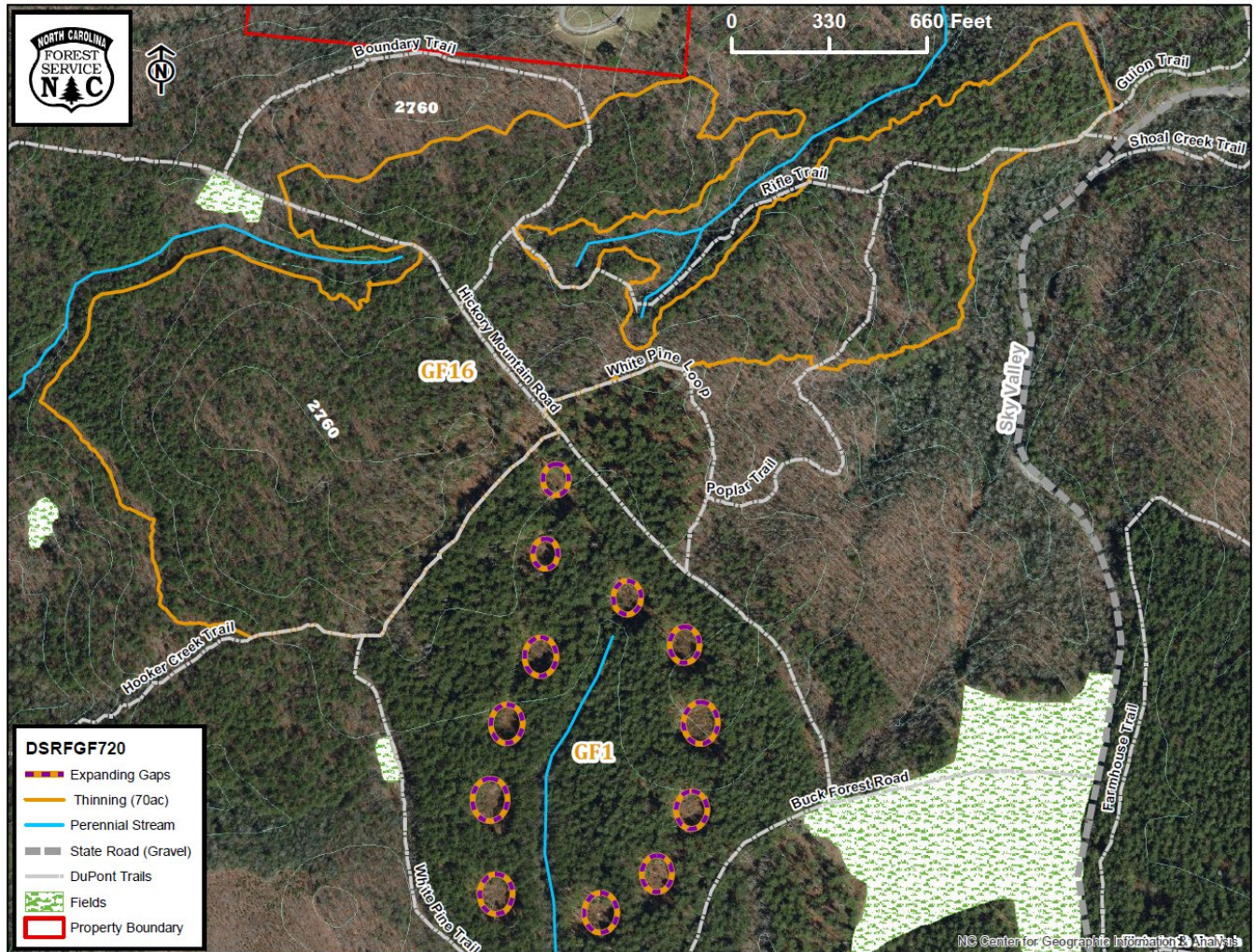


Figure 19: Depiction of Planned ~82-acre timber harvest near the Guion Farm access area

CONTACT INFORMATION

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