



**NORTH CAROLINA  
DEPARTMENT OF AGRICULTURE  
AND CONSUMER SERVICES**



**NORTH CAROLINA FOREST SERVICE**



**ANNUAL LEGISLATIVE REPORT ON WILDFIRES**

Oct. 1, 2022

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Scott Bisette, Assistant Commissioner  
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Pursuant to G.S. 106-911, the North Carolina Forest Service, a division of the North Carolina Department of Agriculture and Consumer Services, respectfully submits this annual report on wildfire in North Carolina for fiscal year 2021.

## Contents

STATUTORY REQUIREMENT .....	3
§ 106-911. Annual report on wildfires.....	3
OVERVIEW OF FIRE CONTROL.....	3
SUMMARY OF ALL WILDFIRE DATA FOR FISCAL YEAR 2022 .....	5
Effects of weather on wildfire season in North Carolina.....	6
MAJOR WILDFIRE DATA FOR FISCAL YEAR 2022 .....	10
Overtime data.....	13
Fiscal impacts.....	15
WILDFIRE PERSONNEL AND EQUIPMENT.....	17
Type 6 engine .....	17
Wildland fire tractor plow units.....	17
Aviation resources .....	18
CONTACT INFORMATION.....	21

## **STATUTORY REQUIREMENT**

### **§ 106-911. Annual report on wildfires**

Beginning Oct. 1, 2012 and no later than Oct. 1 of each year, the Commissioner shall submit a written report on wildfires in North Carolina to the Chairs of the House Appropriations Subcommittee on Natural and Economic Resources and the Senate Appropriations Committee on Natural and Economic Resources, the Joint Legislative Commission on Governmental Operations, and the Fiscal Research Division of the General Assembly. The report shall include the following information for all major or project wildfires during the prior fiscal year:

- (1) The date, location and impacts (property damage and any injuries or deaths) from the wildfire
- (2) The following data for firefighters and related support personnel involved in fighting the wildfire:
  - a. Total overtime hours worked
  - b. Total compensation paid for overtime
  - c. The portion of compensation paid that was reimbursed to the State
- (3) The fiscal impact of the wildfire, including total costs, reimbursable costs and costs incurred by the State

## **OVERVIEW OF FIRE CONTROL**

North Carolina has 18.8 million acres of forestland. Wildfire is one of the greatest threats to this important and valuable natural resource. The North Carolina Forest Service (NCFS) is responsible for protecting state and privately-owned forestland from forest fires. The NCFS forest fire protection program is managed on a cooperative basis with each of the 100 North Carolina counties. Areas of focus for the fire program include fire prevention efforts, pre-suppression activities (including extensive training of personnel and cooperators), aggressive suppression efforts on all wildfires and law enforcement follow-up.

NCFS, local fire departments and communities across the state are working together to prevent, prepare for and lessen the impact of wildfires. Maintaining a well-trained, proficient forest fire control organization is like maintaining a well-trained army. Fire training occurs year-round. New personnel are constantly being trained to maintain capabilities. Veteran firefighters regularly undergo refresher training in suppression tactics, strategy, organization and management.

A study conducted by the U.S. Forest Service and the University of Wisconsin-Madison indicated that North Carolina leads the nation in the amount of area classified as wildland-urban interface (WUI). The WUI is the area where structures and other human development meet or intermingle with undeveloped wildland, forest or vegetative fuels. While North Carolina has the most WUI acres, it also ranks fifth in most housing units within the WUI. The interface creates great challenges for fire managers, as nearly every wildfire or its associated smoke may impact homes, roads, farms or other developments.

Table 1 illustrates the need to keep wildfires as small as possible through early detection and rapid response, which are critical to reducing fire size, protecting property and minimizing overall loss.

Table 1. Historical wildfire activity in North Carolina, FY 2013-2022

FY	Fires	Acres	100+ Acre Fires	100+ Acres Burned	Percent of Total Fires	Percent of Acreage Burned on 100+ Ac. Fires
2013	3,542	11,026	14	3,647	0.4%	33.1%
2014	4,624	13,358	14	4,448	0.3%	33.3%
2015	3,991	9,903	9	2,647	0.2%	26.7%
2016	3,210	18,808	12	11,992	0.4%	63.8%
2017	5,541	79,674	38	69,389	0.7%	87.1%
2018	4,553	13,647	14	5,575	0.3%	40.9%
2019	2,823	6,786	8	1,846	0.3%	27.2%
2020	3,337	7,600	12	2,708	0.4%	35.6%
2021	3,520	9,633	9	3,285	0.3%	34.1%
2022	6,887	26,958	29	11,316	0.4%	42.0%
<b>Total</b>	<b>42,028</b>	<b>197,393</b>	<b>159</b>	<b>116,853</b>	<b>0.4%</b>	<b>59.2%</b>
Average	4,203	19,739	16	11,685	0.4%	42.4%

From fiscal years 2013-2022, 197,393 acres of woodland burned in North Carolina wildfires. Of these wildfires, 116,853 acres or 59% of the total area burned, were burned in fires larger than 100 acres. However, 100+ acre fires only made up 0.4% of the total number of fires for this 10-year period.



The total number of wildfires per fiscal year is shown in Figure 1 while Figure 2 shows the total number of acres burned in wildfires per fiscal year from 2013-2022.

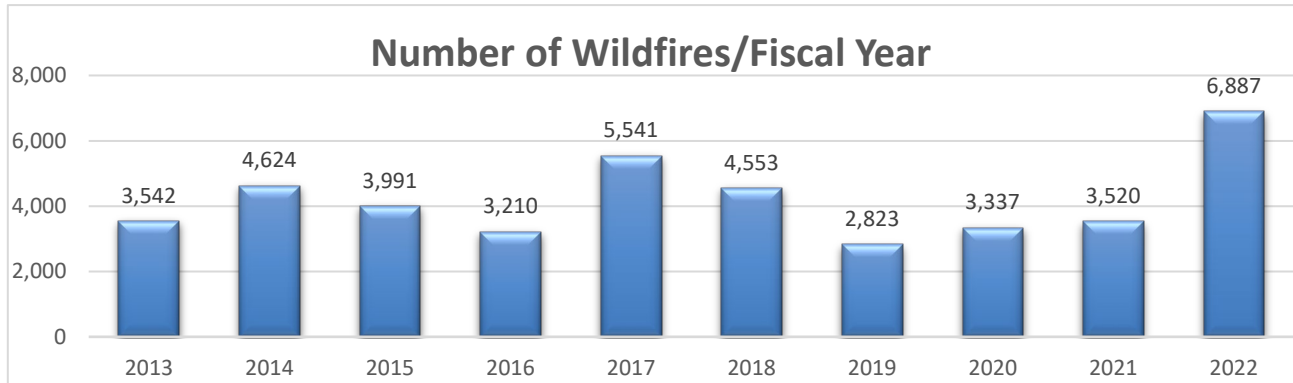


Figure 1. Wildfire activity per fiscal year in North Carolina, FY 2013-2022

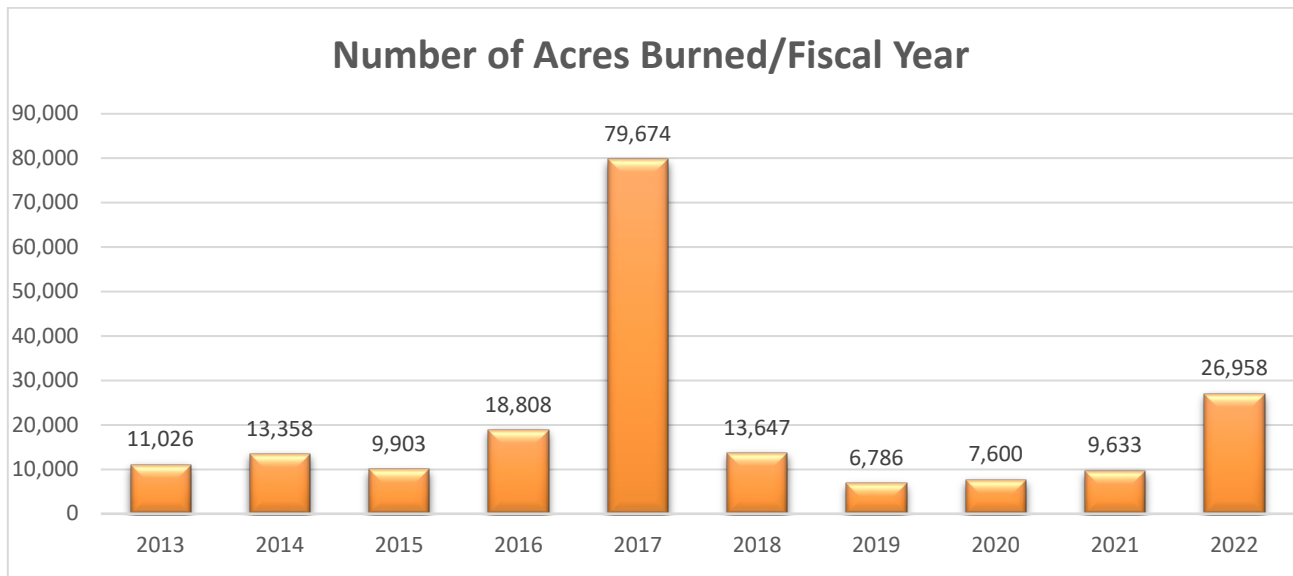


Figure 2. Wildfire acres burned per fiscal year in North Carolina, FY 2013-2022

## SUMMARY OF ALL WILDFIRE DATA FOR FISCAL YEAR 2022

From July 1, 2021 through June 30, 2022, 6,887 wildfires<sup>1</sup> burned 26,958 acres in North Carolina. The average fire size was 2.8 acres with the largest wildfire being 1,938 acres. Of these 6,887 wildfires, only 1% could be directly linked to a natural ignition source i.e., lightning. That means 99% of the wildfires started in fiscal year 2022 were directly related to human activity. As the population of the state increases, the number of wildfires per year are expected to also increase.

<sup>1</sup> NCFS has the statutory (G.S. 106-895) requirement of prevention and control of forest fires in any and all parts of this state except for federal property. Through administrative decision, areas within municipal limits are considered beyond the jurisdiction of the N.C. Forest Service.

### Effects of weather on wildfire season in North Carolina

Weather plays an important role in determining wildfire activity and severity in North Carolina. Historically, North Carolina has two distinct wildfire seasons that occur in the fall and in the spring. During these two times of the year, weather and vegetation conditions on the landscape increase the potential for wildfires.

Figure 3 below provides a visualization of the general trend for wildfires throughout the year. Wildfire occurrence was generally low at the beginning of fiscal year 2022. Typically, vegetation is at full greenness during the summer months, which reduces the danger of having a wildfire. Moving into the fall of the year, vegetative fuel becomes more available with the physiological changes in vegetation as moisture content decreases. Wildfire occurrence in North Carolina normally begins to increase in October coinciding with leaf fall.

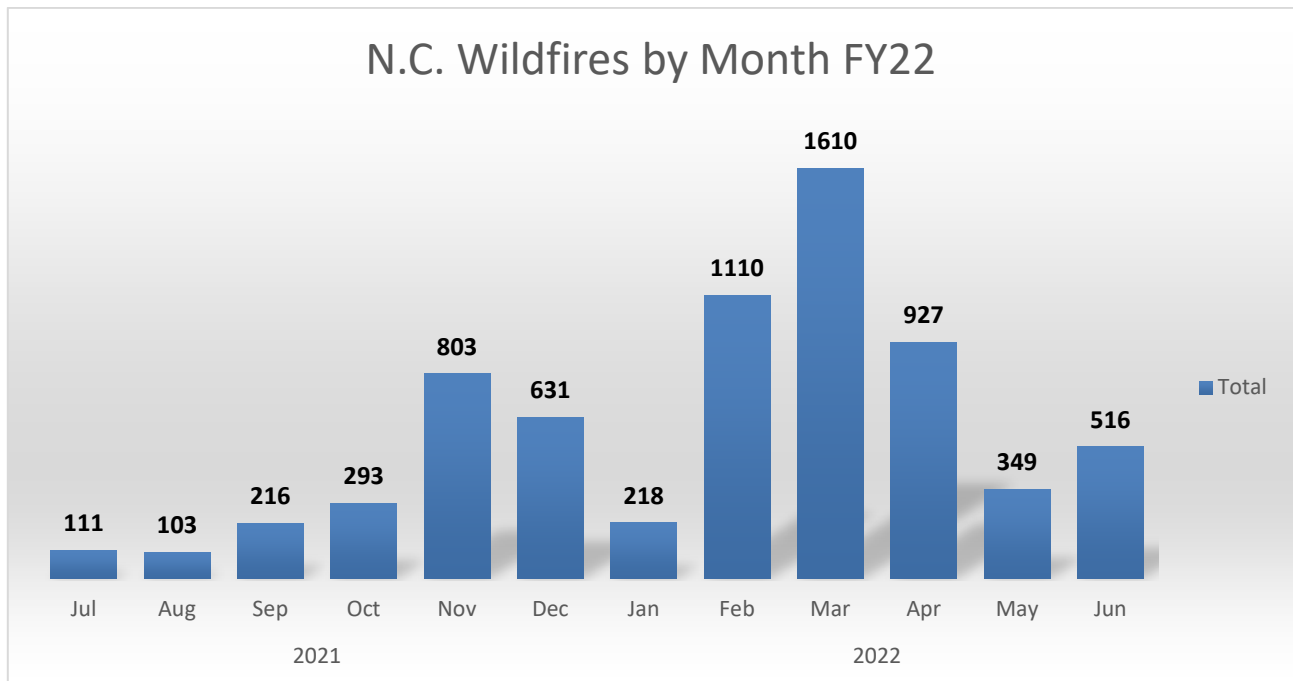


Figure 3. Wildfires in North Carolina by month during FY22

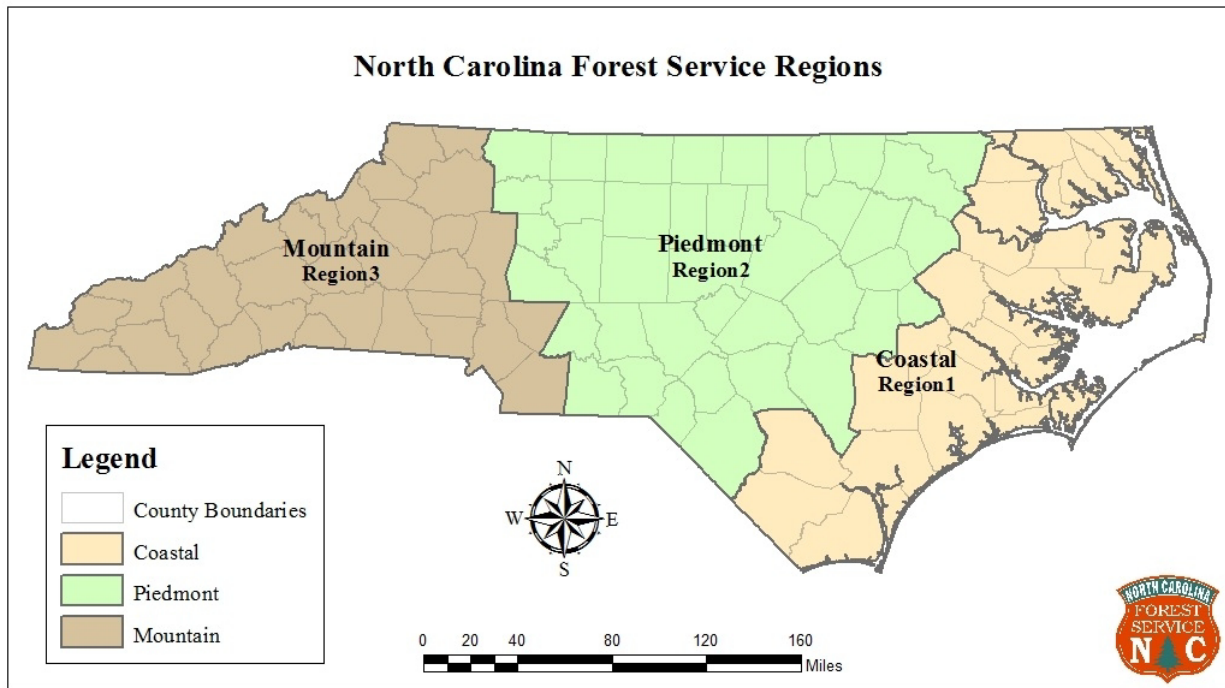
This trend of increasing available vegetation continues through the winter months into spring. During winter and spring, it is very common for North Carolina to have periods of weather with low relative humidity and strong wind events. These weather events, along with receptive vegetation, combine to create high fire danger that correlates to an increase in the number of wildfires during this period.

Wildfire occurrence normally starts to decrease as vegetation starts new growth in late spring. The wild card in these trends is drought. North Carolina can experience severe droughts and during these events, wildfire seasons can extend beyond the historical wildfire season. Some of the largest fires that have occurred in the state have been during the summer months as shown in Table 2.

Table 2. Recent examples of large summer wildfires in North Carolina

Fire Name	County	Acres Burned	Start Date
<b>Pains Bay</b>	Dare	45,294	5/5/11
<b>Juniper Road</b>	Pender	31,140	6/19/11
<b>Simmons Road</b>	Cumberland/Bladen	5,438	6/20/11
<b>Evans Road</b>	Hyde/Washington/Tyrrell	41,534	6/1/08

Figures 4 and 5 plus Tables 3-7 outline all FY22 wildfires occurring by region, including estimated damages and causes.



Map created by:  
North Carolina Forest Service

Date: 10/1/2012

Data from: North Carolina Forest Service  
Data current as of 10/1/2012.

Figure 4. Map of North Carolina Forest Service Regions

Table 3. Wildfires by North Carolina Forest Service Region in FY22

NCFS Region	# of Wildfires	% of Wildfires	Wildfire Acres
Coastal	1,427	20.72%	8,724
Piedmont	3,914	56.83%	<b>14,376</b>
Mountain	1,546	22.45%	<b>3,858</b>
<b>Total</b>	<b>6,887</b>	<b>100.00%</b>	<b>26,958</b>

Table 4. Estimated values of property impacted by wildfires per geographic area in North Carolina during FY22

NCFS Region	Homes and Structures Protected	Est. Value of Homes and Structures Protected	Homes and Structures Damaged or Destroyed	Est. Value of Homes and Structures Damaged or Destroyed	Est. Value of Other Property Damaged (Timber, Livestock, Crops, Vehicles)
Coastal	1,420	\$123,993,772	149	\$1,140,832	\$885,998
Piedmont	6,346	\$574,701,058	407	\$2,307,899	\$3,031,764
Mountains	1,814	\$594,592,999	99	\$2,967,251	\$702,420
<b>Total</b>	<b>9,580</b>	<b>\$1,293,287,829</b>	<b>655</b>	<b>\$6,415,982</b>	<b>\$4,620,182</b>

Table 5. Causes of wildfires in North Carolina during FY22

Wildfire Cause	# of Wildfires	Wildfire Acres
Camping	80	1,411
Children	173	166
Debris Burning	3,594	9,871
Fireworks	32	298
Incendiary	413	1,659
Lightning	71	1,057
Machine Use	650	1,472
Miscellaneous	846	2,101
Railroad	37	79
Smoking	31	23
Undetermined	960	8,821
<b>Total</b>	<b>6,887</b>	<b>26,958</b>

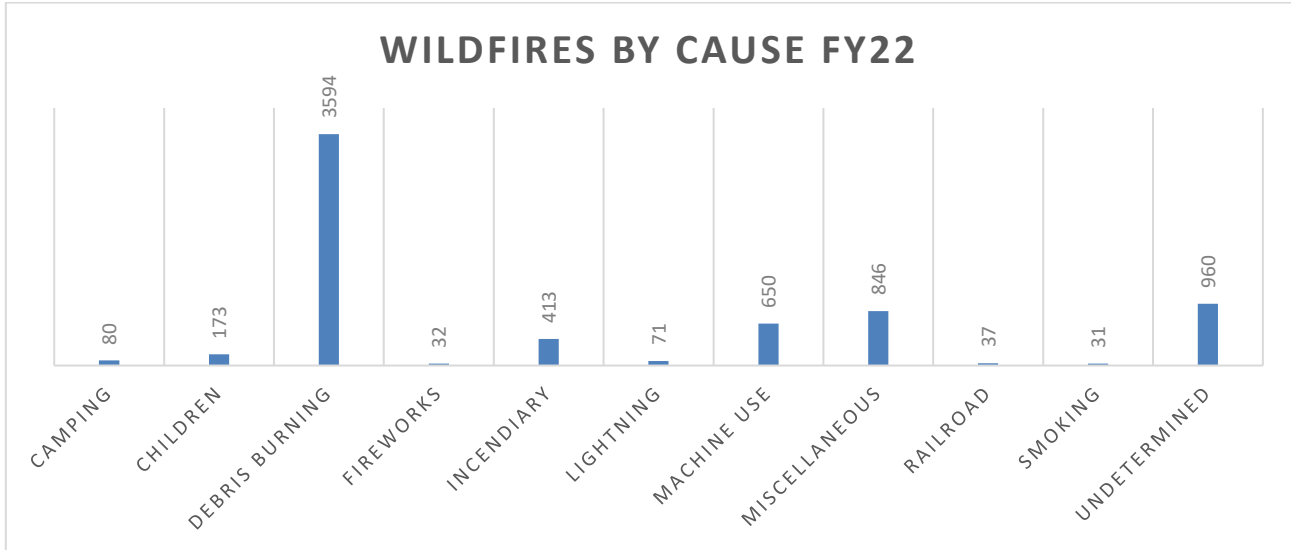


Figure 5. Leading causes of wildfires in North Carolina during FY22

Table 6. Top five counties with the most wildfires in North Carolina during FY22

County	NCFS Region	# of Wildfires	Wildfire Acres	Suppression Cost
Robeson	Piedmont	565	3,871	\$535,557
Harnett	Piedmont	213	297	\$110,212
Richmond	Piedmont	207	266	\$94,439
Columbus	Coastal	173	834	\$171,408
Union	Mountain	168	164	\$60,184
<b>Total for the 5 counties</b>		<b>1,326</b>	<b>5,432</b>	<b>\$971,800</b>
% of annual total		19%	20%	10%

Table 7. Top five counties with most acres burned by wildfire in North Carolina during FY22

County	NCFS Region	# of Wildfires	Wildfire Acres	Suppression Cost
Robeson	Piedmont	565	3,871	\$535,557
Scotland	Piedmont	162	2,624	\$88,894
Hyde	Coastal	13	2,096	\$2,709,586
Surry	Piedmont	85	1,346	\$595,864
Cumberland	Piedmont	143	1,318	\$435,143
<b>Total for the 5 counties</b>		<b>968</b>	<b>11,256</b>	<b>\$4,365,045</b>
% of annual total		14%	42%	47%

## MAJOR WILDFIRE DATA FOR FISCAL YEAR 2022

North Carolina had 47 major wildfires with a start date between July 1, 2021, and June 30, 2022. NCFS classifies a major wildfire when any of the following occurs:

- A wildfire is 100 acres or more in size.
- Any inhabited or inhabitable dwelling has been destroyed regardless of value.
- Structure(s) destroyed with a value greater than \$50,000 (ex. commercial building, detached garage, farm shop).
- A firefighter fatality.
- Any significant firefighter injury that requires an emergency room visit or hospitalization.
- An Incident Management Team (Type 1, 2 or 3) is assigned to the incident.
- Funding is requested from the NCFS State Headquarters.<sup>2</sup>

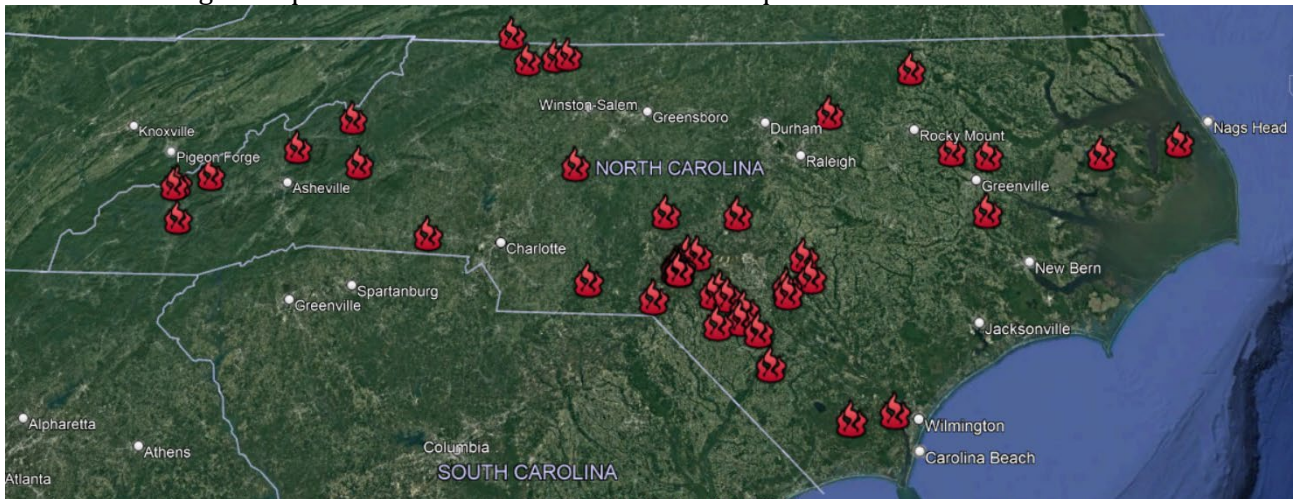


Figure 6. Locations of major wildfires in North Carolina during FY22

The costliest wildfire was the Ferebee Road Fire in Hyde County. It burned 1,938 in Hyde County and was the result of a lightning strike. An extensive pumping operation was needed to move water to the fire perimeter. While invoices are still coming in for this wildfire it's estimated that wildfire will cost North Carolina \$2,694,285.00.



<sup>2</sup> When the cost of responding to an incident is projected to be more than the field unit can afford, financial support from the NCFS State Headquarters budget can be requested.

**Table 8. Dates, locations, and acres burned of major wildfires in North Carolina FY22**

County	Wildfire Name	Fire Start Date	Fire Control Date	Days to Control	Acres	Latitude	Longitude
Scotland	Rifle Range	7/6/2021	7/6/2021	1	378.6	35.000681	-79.504527
Scotland	Gardner Farm	7/31/2021	8/1/2021	2	302.9	34.980812	-79.514904
Hoke	McCain	9/26/2021	9/26/2021	1	155.8	35.063379	-79.35473
Sampson	Libbie	10/2/2021	10/3/2021	2	0.3	35.047298	-78.599413
Stokes	Sauratown Mountain	11/9/2021	11/24/2021	16	40.1	36.352349	-80.384421
Columbus	Silverspoon Road	11/19/2021	11/19/2021	1	140.0	34.41425	-78.8424
Surry	Grindstone	11/27/2021	12/5/2021	9	1,050.4	36.340822	-80.486393
McDowell	Huntsville Mountain	11/30/2021	12/2/2021	3	435.6	35.622271	-81.944219
Surry	Hardin Mill	12/3/2021	12/3/2021	1	0.4	36.318606	-80.701293
Scotland	Strausberg Lane	12/25/2021	12/25/2021	1	226.5	34.966259	-79.484593
Mitchell	Church	12/28/2021	12/28/2021	1	2.7	35.919691	-82.043951
Robeson	Folly Drive	2/2/2022	2/2/2022	1	0.2	34.8139	-79.137563
Harnett	Acorn Lane	2/11/2022	2/11/2022	1	0.7	35.306327	-79.067766
Macon	Mountainside Road Fire	2/12/2022	2/12/2022	1	6.3	35.247088	-83.321436
Sampson	Hayne Stretch	2/19/2022	2/19/2022	1	3.3	34.927154	-78.549566
Hoke	Ruff Road	2/25/2022	2/25/2022	1	77.9	34.855611	-79.188451
Dare Bomb Range	Jackson Road Fire	3/3/2022	3/11/2022	9	1,060.0	35.73333	-75.842222
Hoke	Millwork	3/3/2022	3/3/2022	1	27.6	35.067686	-79.421247
Pitt	Hwy 30	3/6/2022	3/6/2022	1	159.3	35.666969	-77.2368
Robeson	Zelmas Lane	3/6/2022	3/6/2022	1	0.3	34.830173	-79.239343
Craven	River Road #4	3/7/2022	3/7/2022	1	141.4	35.314928	-77.281159
Scotland	Gardner Farm Road	3/15/2022	3/15/2022	1	183.4	34.971712	-79.485513
Robeson	Long Rd	3/17/2022	3/17/2022	1	7.2	34.610108	-78.923483
Surry	Gator	3/19/2022	3/22/2022	4	200.9	36.501102	-80.843891
Brunswick	Cape Fear National	3/20/2022	3/20/2022	1	427.0	34.15609	-78.012243
Robeson	Henry Hammonds Rd	3/20/2022	3/20/2022	1	163.1	34.737369	-79.02154
Scotland	Woodpecker #3	3/21/2022	3/21/2022	1	503.8	34.965776	-79.488867
Franklin	Rebel Court	3/21/2022	3/21/2022	1	0.4	35.946471	-78.379307
Bladen	Neighborhood Road Fire	3/25/2022	3/27/2022	3	29.5	34.833077	-78.713804
Swain	Coopers Creek	3/26/2022	4/1/2022	7	262.2	35.480533	-83.378683
Swain	Stone Pile	3/26/2022	4/1/2022	7	350.0	35.464972	-83.408117
Cumberland	Cedar Creek	3/27/2022	4/6/2022	11	840.9	34.872336	-78.722624
Robeson	Pond	3/27/2022	3/27/2022	1	29.4	34.677966	-79.047716
Scotland	Quicktown	4/2/2022	4/2/2022	1	0.8	34.799196	-79.663715
Haywood	Sheepback Mountain	4/4/2022	4/5/2022	2	277.4	35.535096	-83.120611
Halifax	Reginald Drive	4/11/2022	4/11/2022	1	4.0	36.230533	-77.754102
Moore	Fire Tower Road	4/15/2022	4/15/2022	1	114.0	35.315955	-79.589582
Scotland	Radio Tower	4/30/2022	4/30/2022	1	277.4	34.98056	-79.50364
Brunswick	Driving Creek	5/8/2022	5/18/2022	11	598.7	34.110984	-78.306169
Cleveland	Cleveland Boulder Access	5/12/2022	5/12/2022	1	125.5	35.172806	-81.346043
Scotland	Brass	5/16/2022	5/16/2022	1	150.1	34.98836	-79.474312

County	Wildfire Name	Fire Start Date	Fire Control Date	Days to Control	Acres	Latitude	Longitude
Robeson	Camry Lane	6/1/2022	6/1/2022	1	100.3	34.650976	-79.208704
Rowan	Flint School Road	6/4/2022	6/4/2022	1	100.7	35.618444	-80.274829
Anson	Beaver	6/5/2022	6/5/2022	1	3.1	34.901683	-80.135044
Hyde	Ferebee Road Fire	6/19/2022	7/14/2022	26	1,938.0	35.660085	-76.417465
Buncombe	McDaris Cove Road	6/24/2022	6/29/2022	6	2.1	35.721616	-82.453949
Pitt	Eagle Landing	6/26/2022	6/27/2022	2	2.3	35.700005	-77.497252



## Overtime data

During fiscal year 2022, NCFS permanent employees worked 161,308 hours and earned 80,136 hours of compensatory time related to wildfire suppression in the state. With average hourly pay rate of \$19 per hour for our firefighters, and if funds were available to pay out the fire comp time, the cost would be \$1,602,721. Employees record time worked on an incident with timesheet charge objects. Charge objects are assigned for major fires.

Table 9. Overtime/compensatory time for major wildfires in North Carolina during FY22

County	Wildfire Name	Acres Burned	Overtime Hours Worked	Reimbursement	Hours of Earned Comp. Time
Scotland	Rifle Range	378.6	0	\$0.00	0
Scotland	Gardner Farm	302.9	0	\$0.00	0
Hoke	McCain	155.8	5.5	\$0.00	0
Sampson	Libbie	0.3	0	\$0.00	0
Stokes	Sauratown Mountain	40.1	1290	\$0.00	1803.63
Columbus	Silverspoon Road	140.0	251.5	\$0.00	342.75
Surry	Grindstone	1,050.4	4641.25	\$0.00	6213.5*
McDowell	Huntsville Mountain	435.6	604.5	\$0.00	803.75*
Surry	Hardin Mill	0.4	0	\$0.00	0
Scotland	Strausberg Lane	226.5	0	\$0.00	0
Mitchell	Church	2.7	0	\$0.00	0
Robeson	Folly Drive	0.2	0	\$0.00	0
Harnett	Acorn Lane	0.7	0	\$0.00	0
Macon	Mountainside Road Fire	6.3	0	\$0.00	0
Sampson	Hayne Stretch	3.3	0	\$0.00	0
Hoke	Ruff Road	77.9	0	\$0.00	0
Dare Bomb Range	Jackson Road Fire	1,060.0	1136.5	\$0.00	1704.76
Hoke	Millwork	27.6	0	\$0.00	0
Pitt	Hwy 30	159.3	0	\$0.00	0
Robeson	Zelmas Lane	0.3	0	\$0.00	0
Craven	River Road #4	141.4	0	\$0.00	0
Scotland	Gardner Farm Road	183.4	0	\$0.00	0
Robeson	Long Rd	7.2	0	\$0.00	0
Surry	Gator	200.9	431	\$0.00	545.25
Brunswick	Cape Fear National	427.0	1.5	\$0.00	0
Robeson	Henry Hammonds Road	163.1	5.5	\$0.00	0
Scotland	Woodpecker #3	503.8	0	\$0.00	0
Franklin	Rebel Court	0.4	0	\$0.00	0
Bladen	Neighborhood Road Fire	29.5	44	\$0.00	36.75
Swain	Coopers Creek	262.2	466.75	\$0.00	590.75
Swain	Stone Pile	350.0	0	\$0.00	0

County	Wildfire Name	Acres Burned	Overtime Hours Worked	Reimbursement	Hours of Earned Comp. Time
Cumberland	Cedar Creek	840.9	2389.8	\$0.00	3321.95
Robeson	Pond	29.4	5	\$0.00	5
Scotland	Quicktown	0.8	0	\$0.00	0
Haywood	Sheepback Mountain	277.4	9	\$0.00	0
Halifax	Reginald Drive	4.0	0	\$0.00	0
Moore	Fire Tower Road	114.0	0	\$0.00	0
Scotland	Radio Tower	277.4	0	\$0.00	0
Brunswick	Driving Creek	598.7	1431	\$0.00	1802.25
Cleveland	Cleveland Boulder Access	125.5	0	\$0.00	0
Scotland	Brass	150.1	0	\$0.00	0
Robeson	Camry Lane	100.3	0	\$0.00	0
Rowan	Flint School Road	100.7	0	\$0.00	0
Anson	Beaver	3.1	0	\$0.00	0
Hyde	Ferebee Road Fire	1,938.0	12329.5	\$0.00	17078.27
Buncombe	McDaris Cove Road	2.1	0	\$0.00	0
Pitt	Eagle Landing	2.3	0	\$0.00	0

There are times when drought periods and resource availability for wildfire response exceeds the local capabilities. We term these “Severity” events and respond by dispatching resources from other parts of the state or from outside the state when needed. This support concept has been utilized many times including during the fall 2016 wildfires.

During the 2021-2022 fiscal year, the NCFS supported three Severity events. A total of 54 NCFS permanent employees worked 4,974.25 hours and earned 3,078.26 hours of compensatory time related to these wildfire severity events.

From Nov. 29, 2021 through Dec. 13, 2021, the NCFS implemented a Burn Ban due to drought conditions in the state. The NCFS paid out to 357 employees for the Grindstone Fire, Huntsville Mountain Fire, and all other fire overtime that occurred during the Burn Ban. Total overtime payout for this seven-day period was \$225,936.

Temporary employees do not earn comp time but are immediately paid out for their overtime. On the 47 major fires in fiscal year 2021-2022, temporary employees were paid for 1,047.38 hours of fire overtime, approximately \$12,359.

## Fiscal impacts

NCFS tracks cost information for reimbursable<sup>3</sup> and billable<sup>4</sup> wildfires. The NCFS Fire Reporting System tracks estimated costs. These estimated costs include employee salary (based on an average salary of the position) and standard equipment use rates. Table 10 shows the estimated costs of each of the 47 major fires that started July 1, 2021 through June 30, 2022. The total estimated suppression cost for all wildfires in fiscal year 2022 was \$9,313,370.

Table 10. Estimated fiscal impacts of wildfires in North Carolina during FY22

County	Wildfire Name	Acres Burned	Estimated Cost	Reimbursement	State Cost
Scotland	Rifle Range	378.6	\$823.68	\$0	\$823.68
Scotland	Gardner Farm	302.9	\$1,640.88	\$0	\$1,640.88
Hoke	McCain	155.8	\$1,668.24	\$0	\$1,668.24
Sampson	Libbie	0.3	\$2,181.36	\$0	\$2,181.36
Stokes	Sauratown Mountain	40.1	\$565,911.76	\$0	\$565,911.76
Columbus	Silverspoon Road	140.0	\$37,323.09	\$0	\$37,323.09
Surry	Grindstone	1,050.4	\$512,656.00	\$0	\$6,370.03
McDowell	Huntsville Mountain	435.6	\$81,293.00	\$0	\$81,293.00
Surry	Hardin Mill	0.4	\$2,526.93	\$0	\$2,526.93
Scotland	Strausberg Lane	226.5	\$953.86	\$0	\$953.86
Mitchell	Church	2.7	\$483.84	\$0	\$483.84
Robeson	Folly Drive	0.2	\$992.20	\$0	\$992.20
Harnett	Acorn Lane	0.7	\$3,777.42	\$0	\$3,777.42
Macon	Mountainside Road Fire	6.3	\$3,132.00	\$0	\$3,132.00
Sampson	Hayne Stretch	3.3	\$6,466.90	\$0	\$6,466.90
Hoke	Ruff Road	77.9	\$25,124.90	\$0	\$25,124.90
Dare Bomb Range	Jackson Road Fire	1,060.0	\$37,000.00	\$0	\$37,000.00
Hoke	Millwork	27.6	\$6,497.59	\$0	\$6,497.59
Pitt	Hwy 30	159.3	\$20,171.72	\$0	\$20,171.72
Robeson	Zelmas Lane	0.3	\$308.64	\$0	\$308.64
Craven	River Road #4	141.4	\$32,015.97	\$0	\$32,015.97
Scotland	Gardner Farm Road	183.4	\$1,309.00	\$0	\$1,309.00
Robeson	Long Rd	7.2	\$2,295.56	\$0	\$2,295.56
Surry	Gator	200.9	\$28,609.76	\$0	\$28,609.76
Brunswick	Cape Fear National	427.0	\$16,567.40	\$0	\$16,567.40
Robeson	Henry Hammonds Road	163.1	\$6,157.40	\$0	\$6,157.40
Scotland	Woodpecker #3	503.8	\$2,479.50	\$0	\$2,479.50
Franklin	Rebel Court	0.4	\$1,344.00	\$0	\$1,344.00

<sup>3</sup> Reimbursable fires – A wildfire where NCFS may obtain a reimbursement of funds from FEMA, U.S. Forest Service, or other agencies

<sup>4</sup> Billable fires – Wildfires where NCFS has a cost share or cooperative agreement or provided suppression services to a federal agency

NCDA&CS | N.C. Forest Service  
Annual Legislative Report on Wildfires  
Fiscal Year 2021-2022

County	Wildfire Name	Acres Burned	Estimated Cost	Reimbursement	State Cost
Bladen	Neighborhood Road Fire	29.5	\$39,612.00	\$0	\$39,612.00
Swain	Coopers Creek	262.2	\$27,405.00	\$0	\$27,405.00
Swain	Stone Pile	350.0	\$34,158.00	\$0	\$34,158.00
Cumberland	Cedar Creek	840.9	\$282,990.70	\$0	\$282,990.70
Robeson	Pond	29.4	\$11,348.00	\$0	\$11,348.00
Scotland	Quicktown	0.8	\$195.00	\$0	\$195.00
Haywood	Sheepback Mountain	277.4	\$102,065.87	\$0	\$102,065.87
Halifax	Reginald Drive	4.0	\$1,397.01	\$0	\$1,397.01
Moore	Fire Tower Road	114.0	\$1,786.66	\$0	\$1,786.66
Scotland	Radio Tower	277.4	\$803.25	\$0	\$803.25
Brunswick	Driving Creek	598.7	\$27,757.00	\$0	\$27,757.00
Cleveland	Cleveland Boulder Access	125.5	\$7,619.59	\$0	\$7,619.59
Scotland	Brass	150.1	\$1,149.00	\$0	\$1,149.00
Robeson	Camry Lane	100.3	\$7,246.65	\$0	\$7,246.65
Rowan	Flint School Road	100.7	\$2,219.50	\$0	\$2,219.50
Anson	Beaver	3.1	\$1,172.50	\$0	\$1,172.50
Hyde	Ferebee Road Fire	1,938.0	\$2,694,285.00	\$0	\$2,694,285.00
Buncombe	McDaris Cove Road	2.1	\$13,637.00	\$0	\$13,637.00
Pitt	Eagle Landing	2.3	\$6,916.50	\$0	\$6,916.50

To have resources available for immediate response to wildfires, NCFS places employees on-call during evening hours, weekends, and holidays. The number of employees placed On-Call increases as unfavorable wildfire conditions escalate. In FY22 NCFS employees were on call for over 325,180 hours at a cost of \$695,193.

## WILDFIRE PERSONNEL AND EQUIPMENT

The NCFS would be unable to perform its legislative mandate without trained personnel and specialized equipment. The agency puts a considerable emphasis on training our employees in wildfire and all-hazard emergency response. In fiscal year 2022, NCFS employees spent 43,082 hours in these trainings. Training for incident response is a career endeavor that is essential for safe incident response.

Along with training comes the need for specialized equipment necessary for wildfire response. This equipment ranges from simple tools like a fire rake to complex tools such as helicopters and single engine air tankers. Each tool has a specific use, and it takes all of them for effective wildfire management across the state.

### Type 6 engine

The most visible tools include heavy equipment and aviation resources. The most commonly used of these resources is the Type 6 engine. These units are designed for maneuverability to allow for direct attack on wildfires to minimize the number of acres burned. Many of the wildfires in the state are controlled by these types of engines, equipped with 150-gallon water tanks, pump and hose along with an assortment of hand tools commonly used in wildland fire fighting.



Figure 7. Type 6 engine

### Wildland fire tractor plow units

When wildfires cannot be controlled with Type 6 engines, heavier equipment is needed. Wildland fire tractor plow units are the next line of defense (see Figure 8). These units range in size and configurations depending on the terrain in the portion of the state in which they are located. While configurations vary, the purpose of all these units is to quickly install firebreaks.

All units are equipped with a plow pulled behind the tractor that allows for the quick construction of a firebreak. Currently, the NCFCS has 92 of these tractor plow units across the state that are designated for initial attack of wildland fires.



Figure 8. This John Deere 750K is one of the 92 wildland fire tractor plow units across the state.

### Aviation resources

Aviation is a critical tool used in the detection and control of wildfires. In North Carolina, the aviation fleet consists of 11 patrol aircraft, five helicopters and two single engine air tankers (SEATS) along with several support aircraft, as shown in Figures 9-13.



Figure 9. Patrol plane



Figure 10. AStar 350B3 helicopter



Figure 11. Air tractor (AT-802F)



Beechcraft T-34C Turbo Mentor

Figure 12. Lead plane (T-34C)



Figure 13. SEAT (single engine air tanker) load crew plane

## CONTACT INFORMATION

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