



Wildfire Activity: A Look Back and Outlook for Fall / Winter

Drought Management Advisory Council

Annual Meeting
September 18, 2025



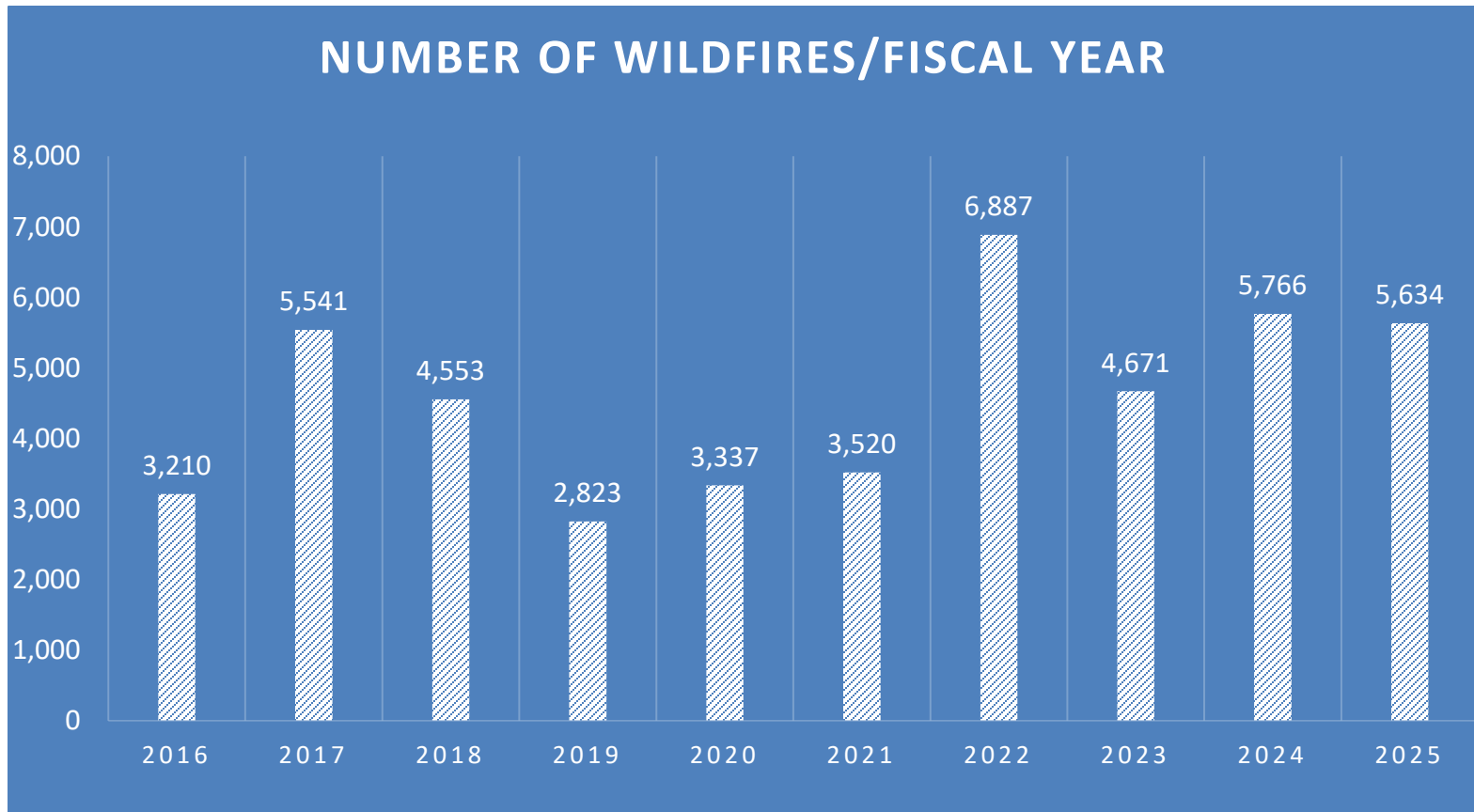


NC Forest Service Wildfire Activity, FY16 - FY25

FY	Fires	Acres	100+ Acre Fires	100+ Acres Burned	Percent of Total Fires	Percent of Acreage Burned on 100+ Ac. Fires	YoY % Change, Total Fire Count	YoY % Change, Total Acres
2016	3,210	18,808	12	11,992	0.4%	63.8%		
2017	5,541	79,674	38	69,389	0.7%	87.1%	72.6%	323.6%
2018	4,553	13,647	14	5,575	0.3%	40.9%	-17.8%	-82.9%
2019	2,823	6,786	8	1,846	0.3%	27.2%	-38.0%	-50.3%
2020	3,337	7,600	12	2,708	0.4%	35.6%	18.2%	12.0%
2021	3,520	9,633	9	3,285	0.3%	34.1%	5.5%	26.7%
2022	6,887	26,958	29	11,316	0.4%	42.0%	95.7%	179.9%
2023	4,671	69,690	19	59,487	0.4%	85.4%	-32.2%	158.5%
2024	5,766	28,160	26	18,070	0.5%	64.2%	23.4%	-59.6%
2025	5,634	34,266	38	23,997	0.7%	70.0%	-2.3%	21.7%
Average	4,594	29,522	21	20,766	0.4%	70.3%	Difference from 10yr Avg	
Total	45,942	295,221	205	207,665	0.4%	70.3%	23%	16%

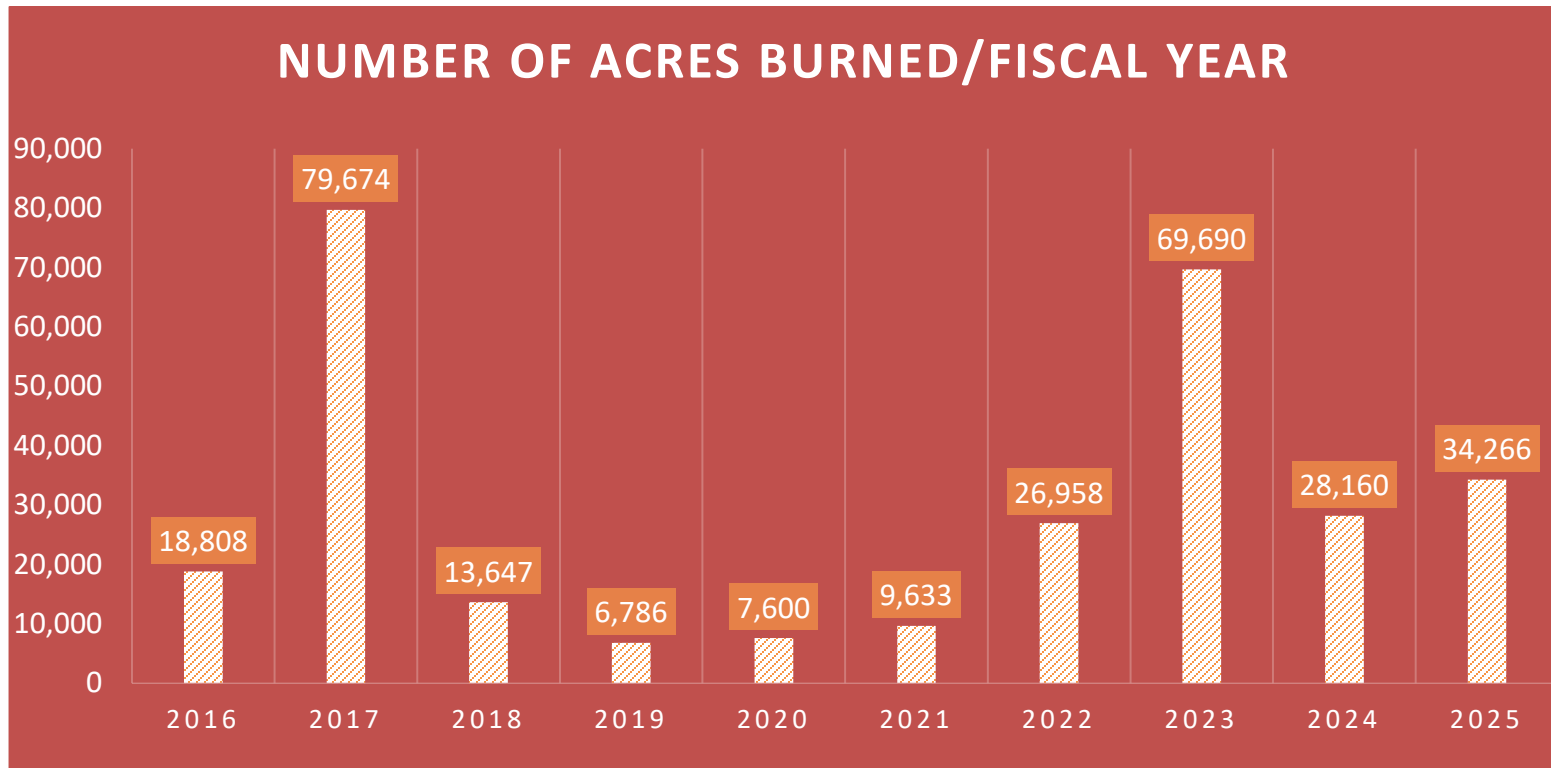


NC Forest Service Wildfire Activity, FY 16-25





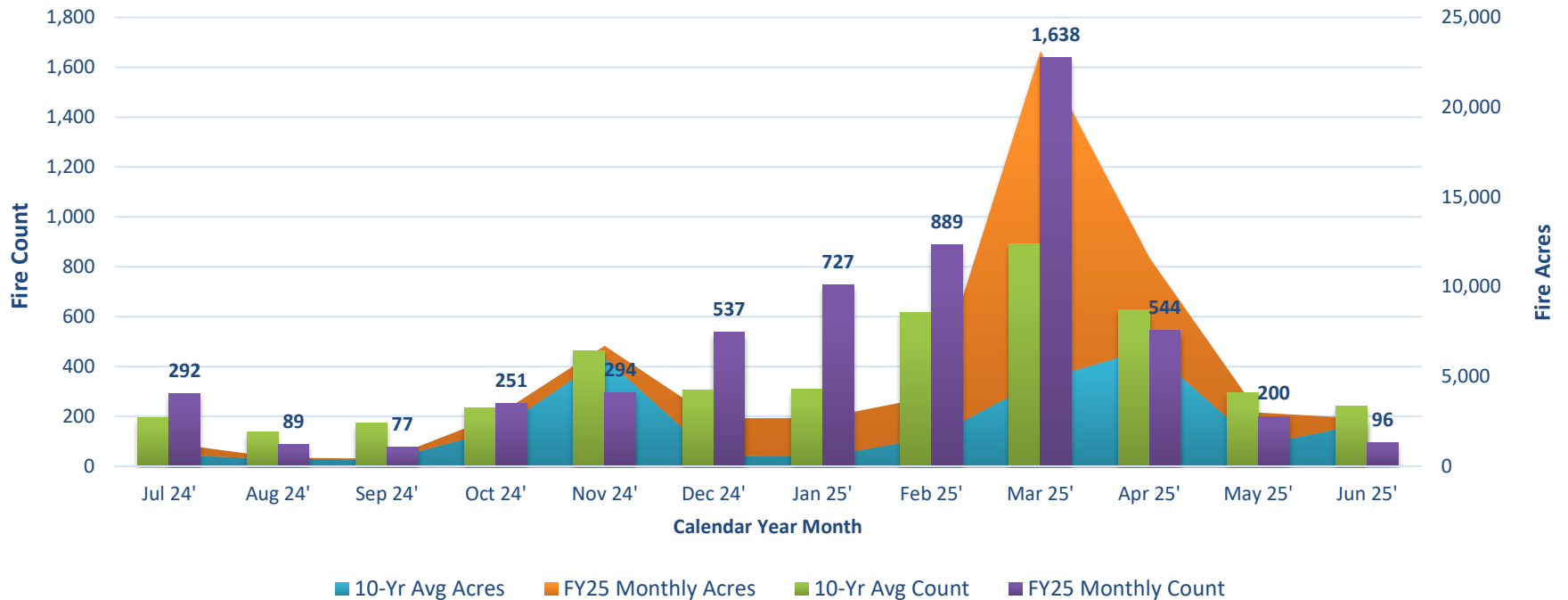
NC Forest Service Wildfire Activity, FY 16-25





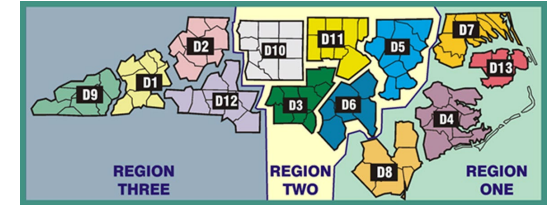
Wildfires by Month – FY25

**Fire Count and Acres by Month
FY25 vs 10-Yr Monthly Averages (CY 2015-2024)**



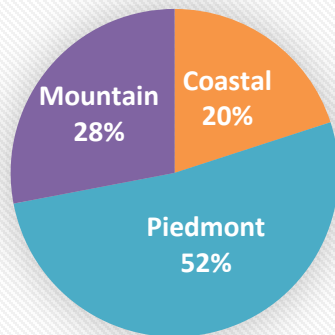


Wildfires by Geographic Area – FY25



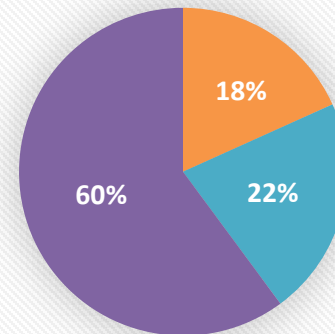
NCFS Region	Wildfire Count	% of Wildfires	Wildfire Acres	% of Wildfire Acres
Coastal	1,107	20%	6,258	18%
Piedmont	2,969	52%	7,406	22%
Mountain	1,558	28%	20,602	60%
Total	5,634	100%	34,266	34,266

Wildfires Count by NCFS Region



Coastal Piedmont Mountain

Wildfires Acres by NCFS Region



Coastal Piedmont Mountain

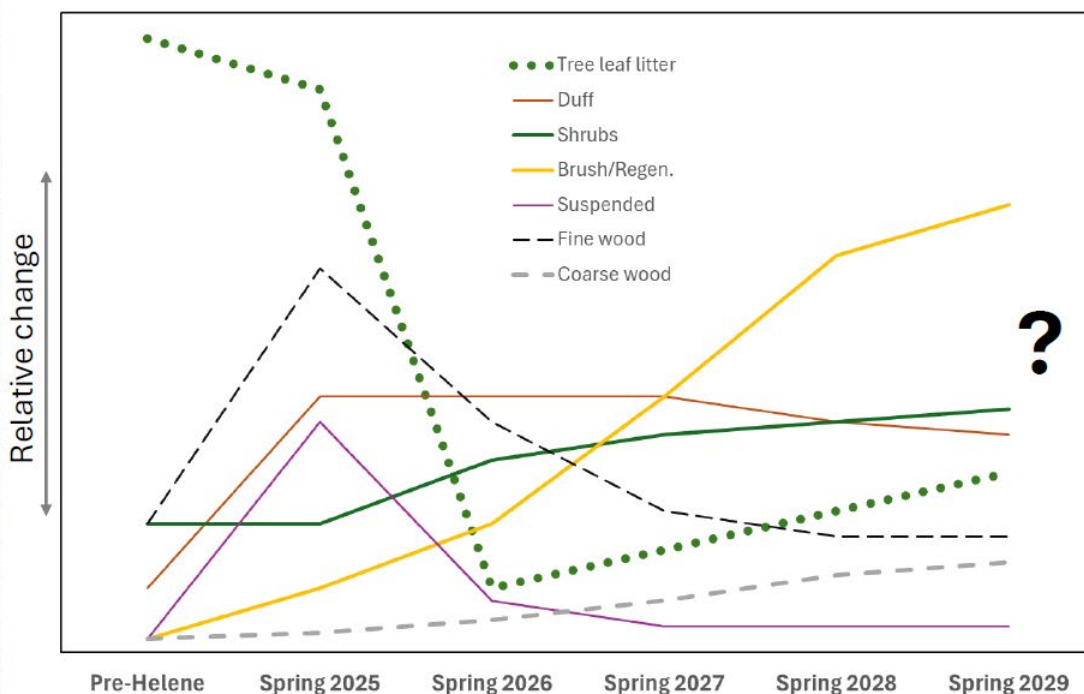
Post-Helene Fire Environment



Slide Snip from “Hurricane Helene impacts to forests and fuels” presentation by Dr. Steve Norman
USDA Forest Service, Southern Research Station

Helene’s fuel legacy will be with us for decades,
but it will change
... how?

Hypothetical successional changes in the fuel components
that may affect fire line behavior after hurricane Helene



State of Emergency, Fuels & Fire Behavior Advisories, Burn Bans...

Fuels and Fire Behavior Advisory Southern Appalachian Mountains and Foothills Effective March 25, 2025



Subject: Fine fuel receptivity: Extraordinarily low humidity has persisted throughout March in the Southern Appalachians, foothills and Piedmont, resulting in accelerated drying of leaf litter and fine fuels left in the wake of Helene's destruction.

Discussion: Hurricane Helene brought catastrophic damage to forests across the advisory area in late September of 2024. Lighter fuels cured rapidly through a winter with below average rainfall, but extreme rates of drying have been observed in recent weeks. Despite well-timed wetting rain, 30-day precipitation has fallen well below average for most of the region. Marked increases in initial attack have been associated with repeating patterns of dry frontal passages. These dry and windy cold fronts look to continue impacting the area during the week ahead, before Gulf moisture and increasing thunderstorm chances potentially return by early April. Much warmer temperatures and increased evaporative demand in April may offset any improvement in the fire environment, especially if sufficient rainfall fails to materialize.

Difference from normal conditions: Mean relative humidity so far this March is the **lowest ever observed** across the advisory area. Consistently poor moisture recovery at night followed by sunny and arid afternoons has tanked 1-hour dead fuel moisture to the lowest levels observed since at least 2011 across the South Carolina Mountains Predictive Service Area (PSA SA31C) and regionally, with all other classes of dead fuel moisture and ERC-Y also setting early season records in the region. Several fires across the Carolinas have exhibited long-range spotting, along with burn periods that have extended over the course of multiple 24-hour periods.

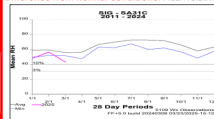


Chart depicting mean RH over 13-year period

Concerns to Firefighters and the Public:

- Extreme receptivity of fine dead fuels resulting in significantly increased amounts of spotting are overwhelming control efforts
- Increased spotting distances—often football field length to several hundred yards—when slope, wind align
- Fire spread and intensity are exceeding model predictions—in some cases significantly.
- Green fuels such as mountain laurel, rhododendron and eastern red cedar are currently volatile and torch easily when surface fire becomes established underneath. This exacerbates spotting problems.
- Poor overnight RH recovery has led to a nearly 24-hour burn period. Significant nighttime intensity and growth have been occurring regularly. Do not assume control efforts will be more successful at night.
- Downed heavy fuels from Helene may scorch but are not yet consuming, however any fine fuels from Helene's impacts are adding significantly to fire intensity—especially if suspended.
- Any pre-Helene dead and down fuels are igniting easily and proving difficult to extinguish.



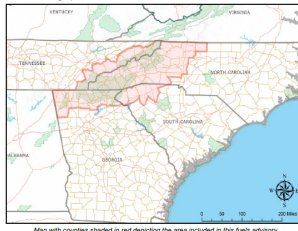
Photo of nighttime fire activity (credit: Wilkes Co. EMS)

Fuels and Fire Behavior Advisory Southern Appalachian Mountains and Foothills Effective March 25, 2025



- Indirect attack strategies should be considered when direct attack is unsuccessful, due to access issues on the ground created by storm debris and landslides
- Tree canopy loss and exposure to direct sunlight will lead to accelerated rates of drying where Helene's winds were most catastrophic, even after leaf-out occurs
- Duff may increasingly contribute to extended mop-up if underlying dryness increases due to below normal rainfall and the onset of green-up.
- Resistance to control has been exceedingly high and, in many cases, efforts have not been successful.
- Fires are frequently crossing natural barriers and containment lines that in other years are considered solid
- Structures and homes have been impacted by these fires. Members of the public should stay informed of any fire activity near their location and should heed evacuation notices. Do not wait until it is too late! And—do not fly drones near areas of fire suppression activity.

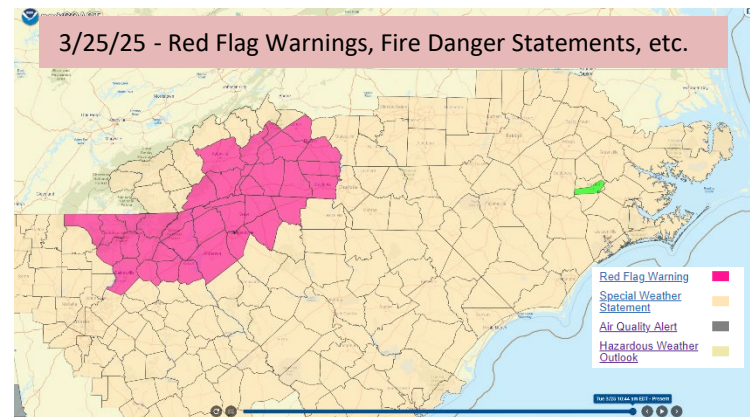
The Fuels and Fire Behavior Advisory Area includes east Tennessee, northern Georgia, northwest South Carolina and western North Carolina.



Map with counties shaded in red depicting the area included in this fuels advisory

Issued By: Southern Area Decision Support in coordination with state and federal partners.

- Statewide Burn Ban began on 3/21, ending 4/1.
- Executive Order #12 (SoE) – 3/26/25
- Multiple Red Flag Events during Spring 2025
- Extreme Fuel Dryness, Enhanced Burn Periods



Fuels and Fire Management Considerations for Hurricane Helene Damaged Areas (2/25)

From the Fire Weather Intelligence Portal -
products.climate.ncsu.edu/fire

Forecasted Adjective Rating for FDRAs in North Carolina

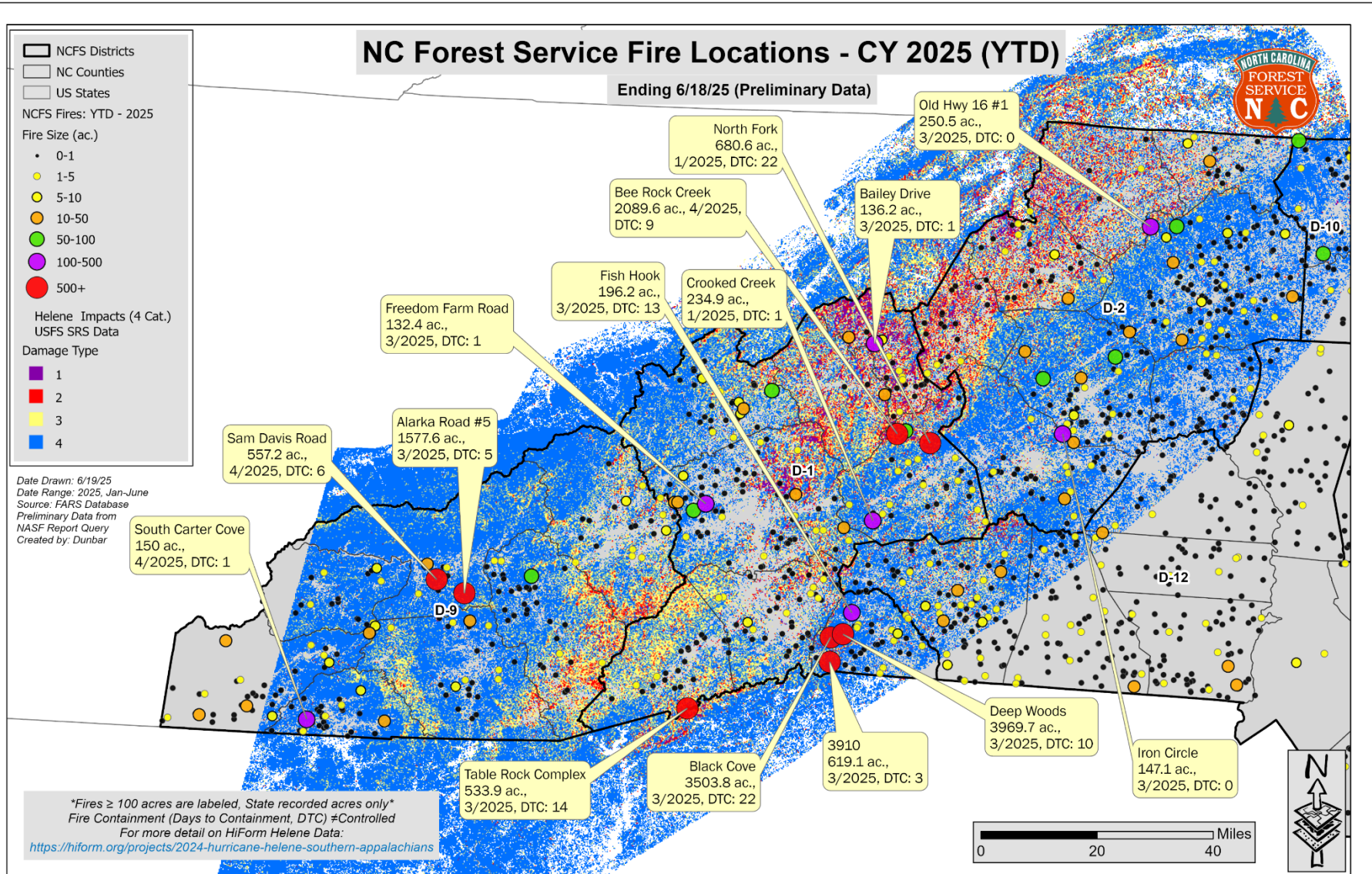
FDRAs	Sat Mar 22	Sun Mar 23	Mon Mar 24	Tue Mar 25	Wed Mar 26	Thu Mar 27	Fri Mar 28
Southern Highlands ☆ x	V	V	H	V	H	H	H
Central Mountains ☆ x	E	E	V	V	V	V	V
Northern Highlands ☆ x	V	V	H	V	H	H	H
Blue Ridge ☆ x	V	V	V	V	V	V	V
Western Piedmont ☆ x	H	V	V	H	H	H	H
Sandhills ☆ z	H	H	H	H	V	V	V
Eastern Piedmont ☆ x	M	M	M	H	H	H	H
Southern Coast ☆ x	V	V	H	V	V	V	V
Northern Coast ☆ x	V	V	H	H	H	H	H

Damage Severity	% of overstory altered/damaged
Catastrophic	>50%
Severe	34-50%
Moderate	26-33%
Light	<25%



SIT-209
System
Report: 209
Criteria Fires
for NC
CY 2025,
ending 6/5:

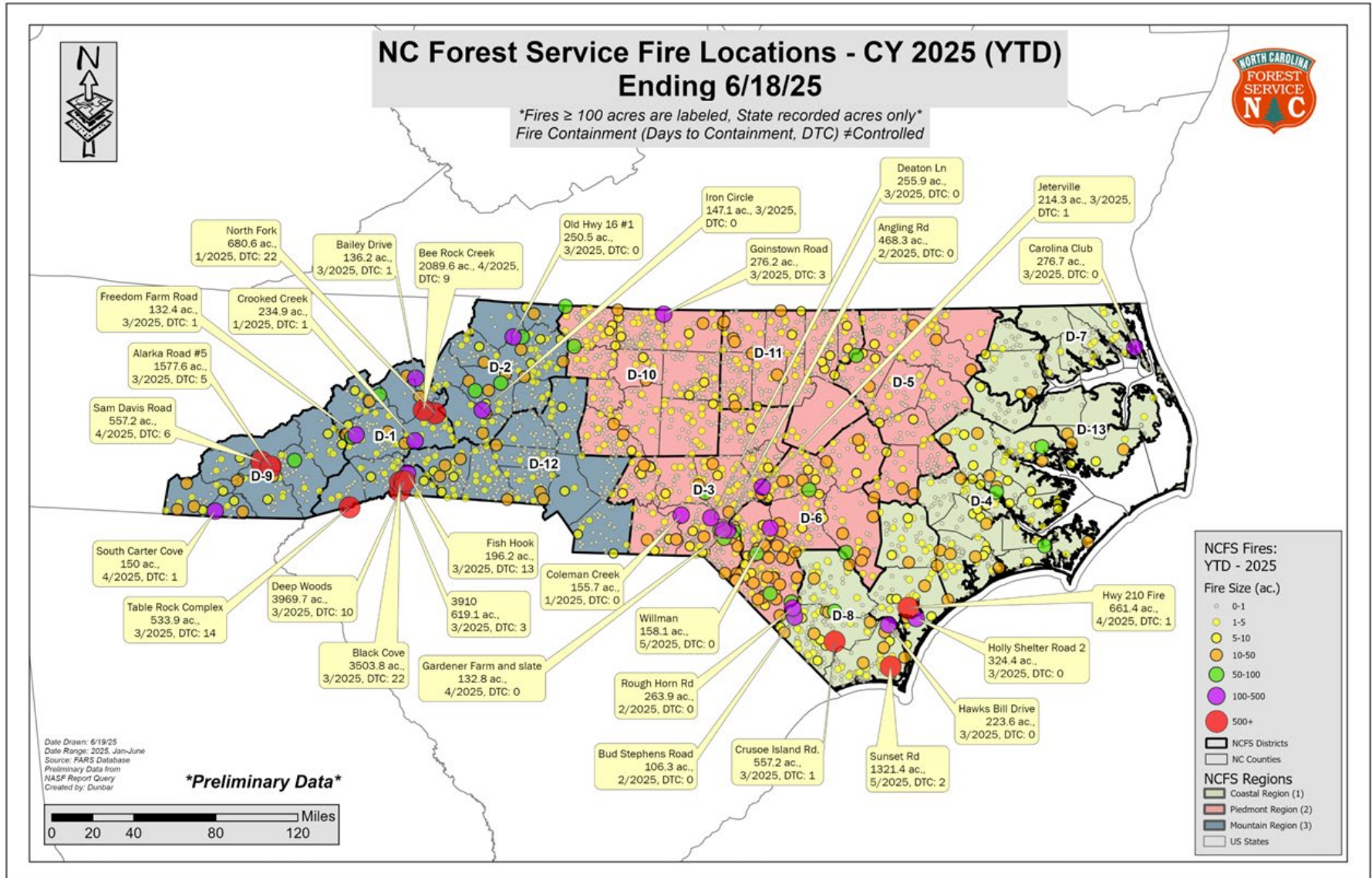
Unit	Incident #	Incident Name	Inc. Type	System Reported Date	209 Status I/ U/ F	209 Reported Cause	Size (Acres)
NC-NCS (NCFS)	NC-NCS-250003	Rebekah Lane	WF	01/26/2025 1455 EST	F	H	1
NC-NCS (NCFS)	NC-NCS-250004	Crooked Creek	WF	01/29/2025 1155 EST	F	H	220
NC-NCS (NCFS)	NC-NCS-250005	Coleman Creek	WF	01/29/2025 1348 EST	F	H	152
NC-NCF (USFS)	NC-NCF-250021	NORTH FORK	WF	01/29/2025 1605 EST	F	U	644
NC-NCS (NCFS)	NC-NCS-250006	Cummings Place	WF	02/04/2025 1345 EST	F	U	1
NC-NCS (NCFS)	NC-NCS-250007	School Drive	WF	02/17/2025 1648 EST	F	H	1
NC-NCS (NCFS)	NC-NCS-250009	Hodge Rd	WF	02/26/2025 1509 EST	F	U	100
NC-NCS (NCFS)	NC-NCS-250011	Angling Road	WF	02/26/2025 1529 EST	F	H	479
NC-NCS (NCFS)	NC-NCS-250010	Bud Stevens Rd	WF	02/26/2025 1818 EST	F	U	106
NC-NCS (NCFS)	NC-NCS-250012	Rough Horn Rd	WF	02/27/2025 1821 EST	F	U	263
NC-NCF (USFS)	NC-NCF-250070	FALLS DAM	WF	03/01/2025 1543 EST	F	H	505
NC-NCS (NCFS)	NC-NCS-250016	Jeterville	WF	03/01/2025 1600 EST	F	U	220
NC-NCF (USFS)	NC-NCF-250075	HICKS CEMETERY	WF	03/01/2025 1723 EST	F	U	198
NC-NCS (NCFS)	NC-NCS-250015	Hawk's Bill Dr	WF	03/01/2025 2307 EST	F	U	215
NC-NCS (NCFS)	NC-NCS-250014	3910	WF	03/02/2025 0725 EST	F	H	619
NC-NCF (USFS)	NC-NCF-250114	MILLIS SAVANNAH	WF	03/10/2025 1358 EDT	F	U	393
NC-NCS (NCFS)	NC-NCS-250017	Bailey Drive	WF	03/11/2025 1612 EDT	F	H	133
NC-NCS (NCFS)	NC-NCS-250018	Rainbo	WF	03/12/2025 1527 EDT	F	H	1
NC-NCS (NCFS)	NC-NCS-250019	Black Cove	WF	03/19/2025 1500 EDT	F	H	3,502
NC-NCS (NCFS)	NC-NCS-250040	Wind Dancer Ln	WF	03/19/2025 1645 EDT	F	H	6
NC-NCS (NCFS)	NC-NCS-250021	Deep Woods	WF	03/19/2025 2000 EDT	F	U	3,969
NC-NCS (NCFS)	NC-NCS-250022	Carolina Club	WF	03/20/2025 0845 EDT	F	H	200
NC-NCS (NCFS)	NC-NCS-250024	Fish Hook	WF	03/20/2025 1700 EDT	F	H	199
NC-NCS (NCFS)	NC-NCS-250029	Old Hwy 16 #1	WF	03/22/2025 0717 EDT	F	U	250
NC-NCS (NCFS)	NC-NCS-250028	Iron Circle	WF	03/22/2025 1239 EDT	F	H	160
NC-NCS (NCFS)	NC-NCS-250027	Goinstown Road	WF	03/22/2025 1430 EDT	F	U	277
NC-NCS (NCFS)	NC-NCS-250030	Hwy 268 #1	WF	03/22/2025 1516 EDT	F	H	1
NC-NCS (NCFS)	NC-NCS-250032	Holly Shelter Rd #2	WF	03/24/2025 1300 EDT	F	H	340
NC-NCS (NCFS)	NC-NCS-250033	Crusoe Island Rd	WF	03/25/2025 1250 EDT	F	U	557
NC-NCS (NCFS)	NC-NCS-250034	Alarka #5	WF	03/25/2025 1500 EDT	F	U	1,575
NC-NCS (NCFS)	NC-NCS-250037	Freedom Farm Rd	WF	03/26/2025 1300 EDT	F	U	130
NC-NCS (NCFS)	NC-NCS-250035	Rattlesnake Branch	WF	03/26/2025 1329 EDT	F	U	1,858
NC-NCS (NCFS)	NC-NCS-250041	Sandy Lane	WF	03/28/2025 1300 EDT	F	U	1
NC-NCS (NCFS)	NC-NCS-250043	Muddy Creek Rd	WF	04/05/2025 1215 EDT	F	H	1
NC-NCF (USFS)	NC-NCF-250207	HAOE LEAD	WF	04/12/2025 1705 CT	F	L	3,103
NC-NCS (NCFS)	NC-NCS-250045	Bee Rock Creek	WF	04/15/2025 1649 EDT	F	U	2,085
NC-NCS (NCFS)	NC-NCS-250047	South Carter Cove	WF	04/15/2025 1719 EDT	F	U	150
NC-NCS (NCFS)	NC-NCS-250050	Bald Fork	WF	04/17/2025 1500 EDT	F	U	105
NC-NCS (NCFS)	NC-NCS-250051	Sam Davis Road	WF	04/18/2025 1549 EDT	F	U	559
NC-NCS (NCFS)	NC-NCS-250052	Hwy 210	WF	04/19/2025 1150 EDT	F	U	661
NC-NCS (NCFS)	NC-NCS-250053	Farm & Slate	WF	04/24/2025 1414 EDT	F	H	138
NC-NCF (USFS)	NC-NCF-250245	BLACK SWAMP	WF	04/27/2025 1235 EDT	U	U	950
NC-NCS (NCFS)	NC-NCS-250055	Sunset RD	WF	05/02/2025 1100 EDT	F	H	1,331
NC-NCS (NCFS)	NC-NCS-250056	Willman Road	WF	05/23/2025 1510 EDT	F	H	115





Distribution of Fires – FY25

Data period ending 6/18



Top 10 Years, Jan-May (from 1970-2025)

- FARS NASF Report Query –
Region 3 Counties by Calendar
Year, binned for Jan-May.

Preliminary Data

Calendar Year (Jan-May)	Count of Fire Discovery Date (Jan - May)	Sum of Final Acreage by Discovery Date (Jan-May)
2025	1,114	16,584
1985	1,460	12,158
1971	1,220	8,650
2017	965	6,921
1981	1,464	6,779
2007	1,430	5,454
2001	1,482	4,885
1999	1,276	4,706
2006	1,502	4,185
2008	871	4,108



Top 5 Number of Wildfires and Acres Burned – FY25

By Fire Count

County	NCFS Region	# of Wildfires	Wildfire Acres
Moore	Piedmont	189	420
Robeson	Piedmont	173	827
Richmond	Piedmont	172	565
Columbus	Coastal	165	1,391
Harnett	Piedmont	141	453
Total for the 5 counties		840	3,655
% of annual total		15%	11%

By Acres

County	NCFS Region	Wildfire Acres	# of Wildfires
Polk	Mountain	8,042	988
McDowell	Mountain	3,534	293
Swain	Mountain	2,168	366
Haywood	Mountain	1,899	108
Brunswick	Coastal	1,773	299
Total for the 5 counties		17,416	2,054
% of annual total		51%	36%

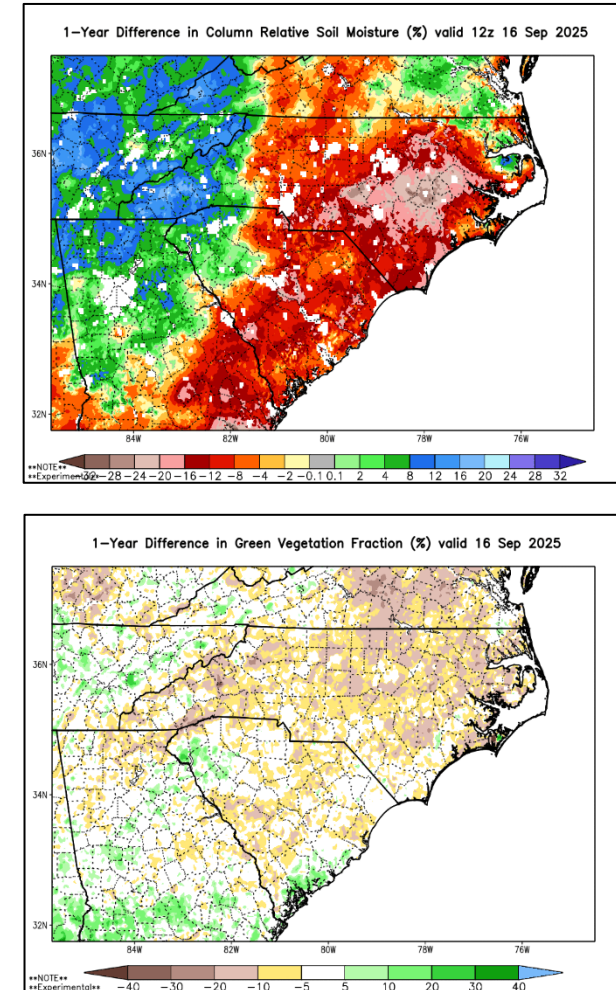
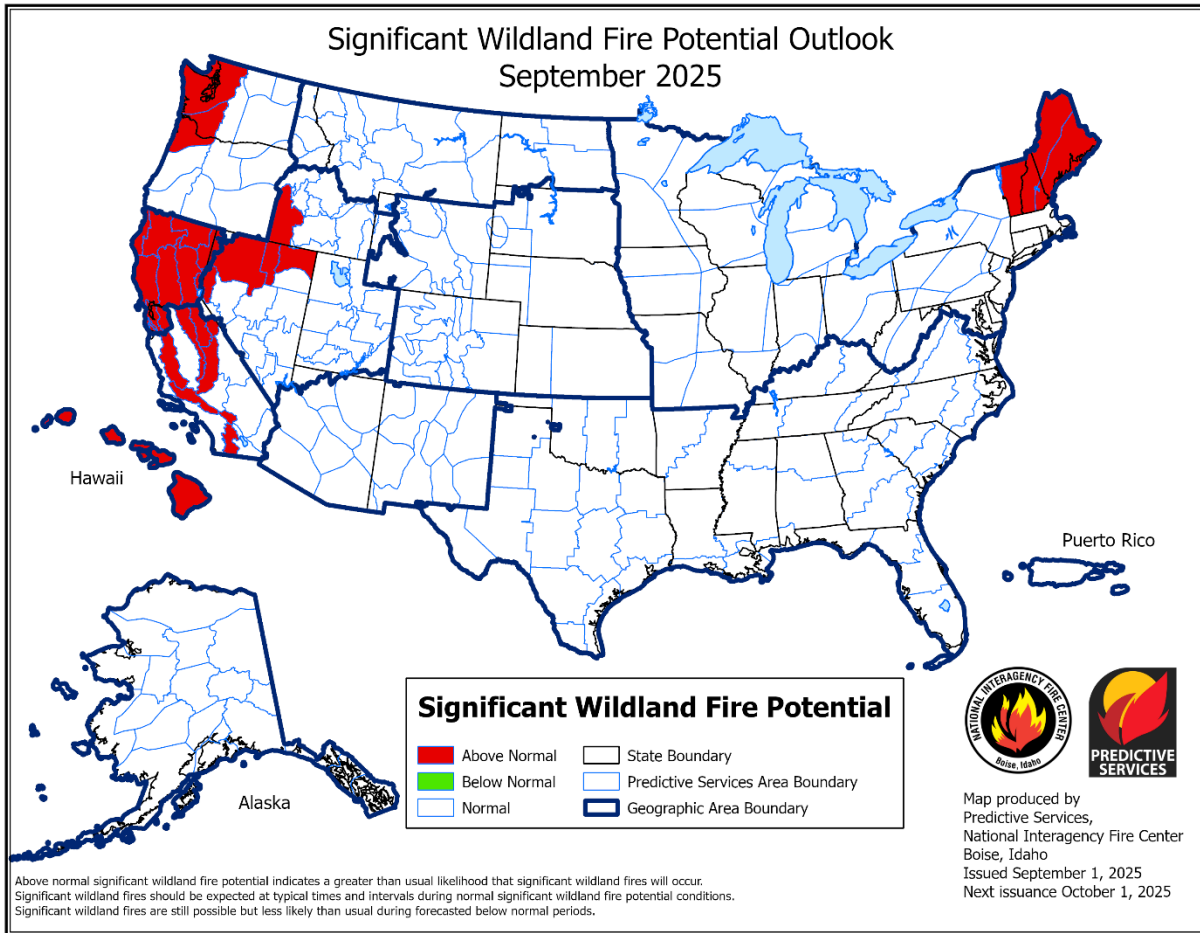


Wildfires by Cause – FY25

Wildfire Cause	# of Wildfires	Wildfire Acres	% of Annual Fires	% of Annual Acreage
Camping	66	843	1%	2%
Children	181	205	3%	1%
Debris Burning	2,682	12,168	48%	36%
Fireworks	52	613	1%	2%
Incendiary	276	2,538	5%	7%
Lightning	70	333	1%	1%
Machine Use	629	2,670	11%	8%
Miscellaneous	929	6,827	16%	20%
Railroad	26	17	0%	0%
Smoking	57	602	1%	2%
Undetermined	666	7,450	12%	22%
Total	5,634	34,266	100%	100%

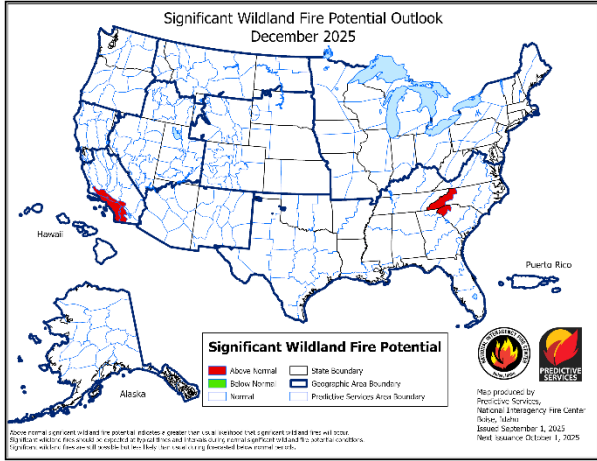
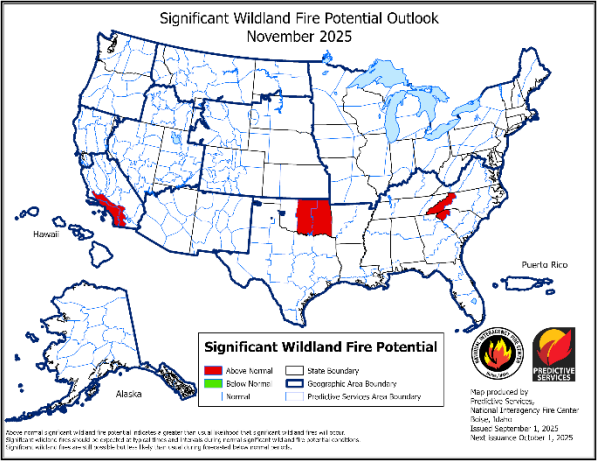
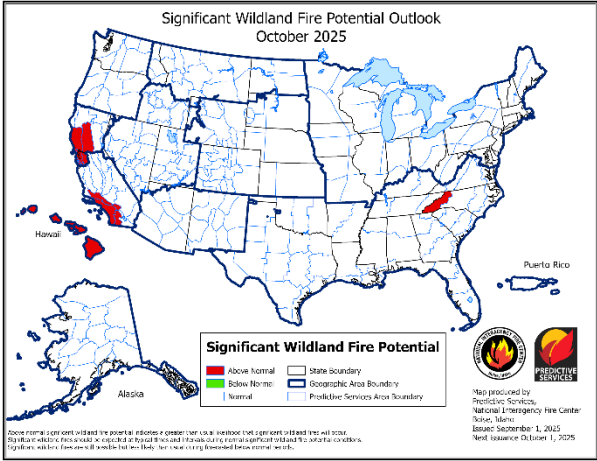


SIGNIFICANT WILDLAND FIRE POTENTIAL OUTLOOK





SIGNIFICANT WILDLAND FIRE POTENTIAL OUTLOOK





QUESTIONS?

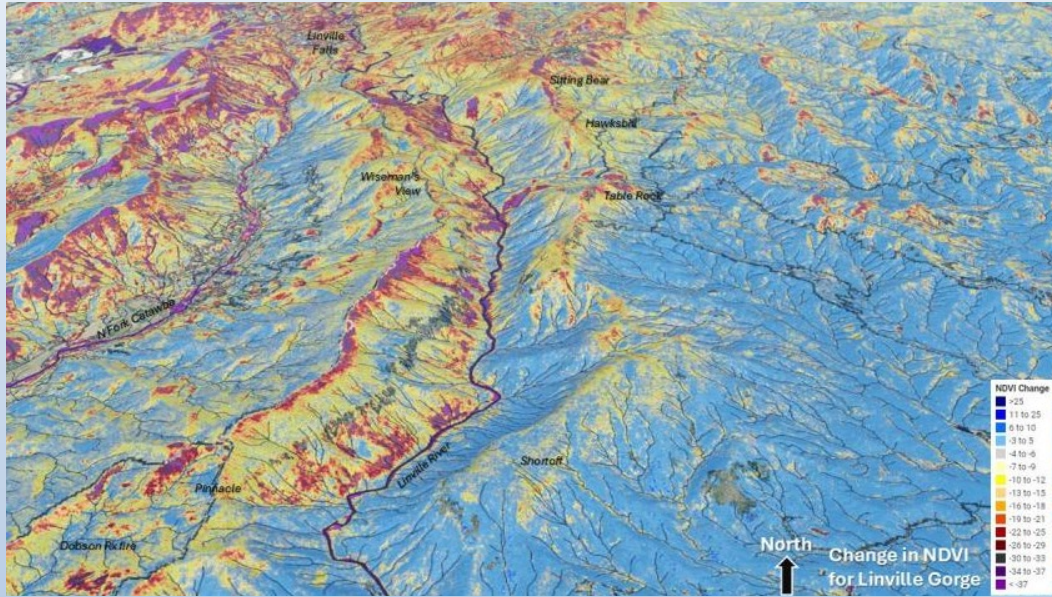


Image from: <https://hiform.org/projects/2024-hurricane-helene-southern-appalachians>

