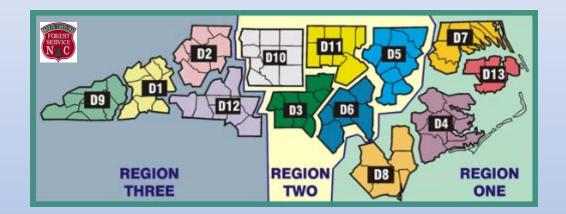
Statewide Seasonal Fire Danger Assessment

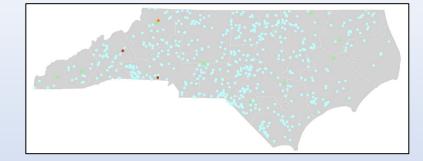


- January 7, 2025 Update -

Created by: Jamie Dunbar Fire Environment Staff Forester NC Forest Service

Incident Activity

December 1 - 31



Statewide Context *January: 10-yr avg is 326 fires for 524 acres February: 10-yr avg is 576 fires for 1,494 acres March: 10-yr avg is 913 fires for 4,727 acres April: 10-yr avg is 659 fires for 6,481 acres May: 10-yr avg is 317 fires for 1,241 acres June: 10-yr avg is 221 fires for 2,408 acres July: 10-yr avg is 183 fires for 626 acres August: 10-yr avg is 137 fires for 420 acres September: 10-yr avg is 171 fires for 383 acres October: 10-yr avg is 226 fires for 1,895 acres November: 10-yr avg is 277 fires for 427 acres

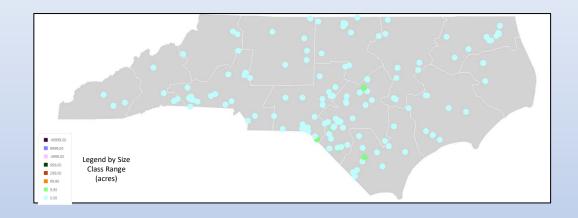
(10-yr Statewide averages, above, are based on FARS 2014-2023 Data)

Largest incidents last <u>7-Days</u> (Ending 1/6): *from fiResponse & preliminary reporting only*

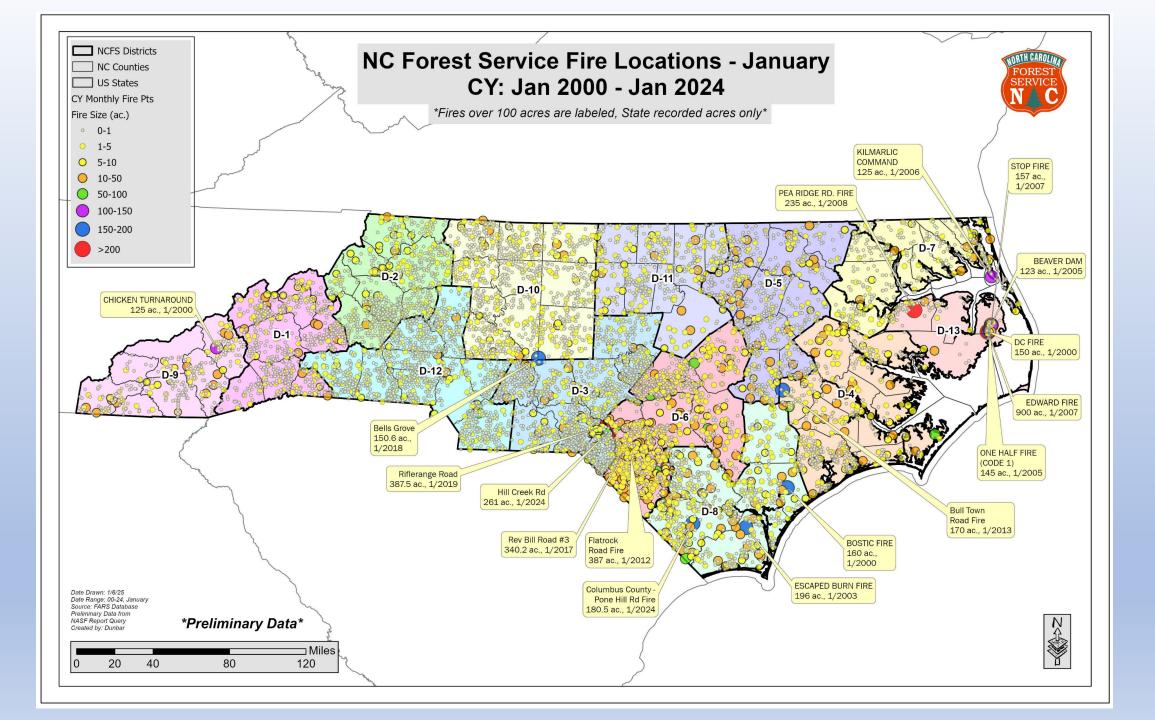
Incident Name	Discovery Date	Region	District	County	 Acres 	ΨÌ
Pleasant Hope Rd	1/3/2025	Region 2	District 6	Robeson County		61.00
Sams Ln	1/4/2025	Region 1	District 8	Columbus County		25.00
Benson Hardee Road	1/3/2025	Region 2	District 6	Johnston County		20.00
Scotland County - St. Luke	1/4/2025	Region 2	District 3	Scotland County		13.38
Dial Rd	1/1/2025	Region 2	District 6	Hoke County		10.23
Hwy 17 North	1/1/2025	Region 1	District 4	Craven County		7.00
Pea Ridge Road Fire	1/4/2025	Region 3	District 1	Polk County		7.00
Bureau Dr	1/4/2025	Region 2	District 6	Cumberland County		6.50
Melvin	1/5/2025	Region 2	District 6	Hoke County		6.00
Guilford County - 5034 Millpo	oin 1/4/2025	Region 2	District 10	Guilford County		5.50
East Ridge Road Fire	1/3/2025	Region 1	District 7	Currituck County		5.00

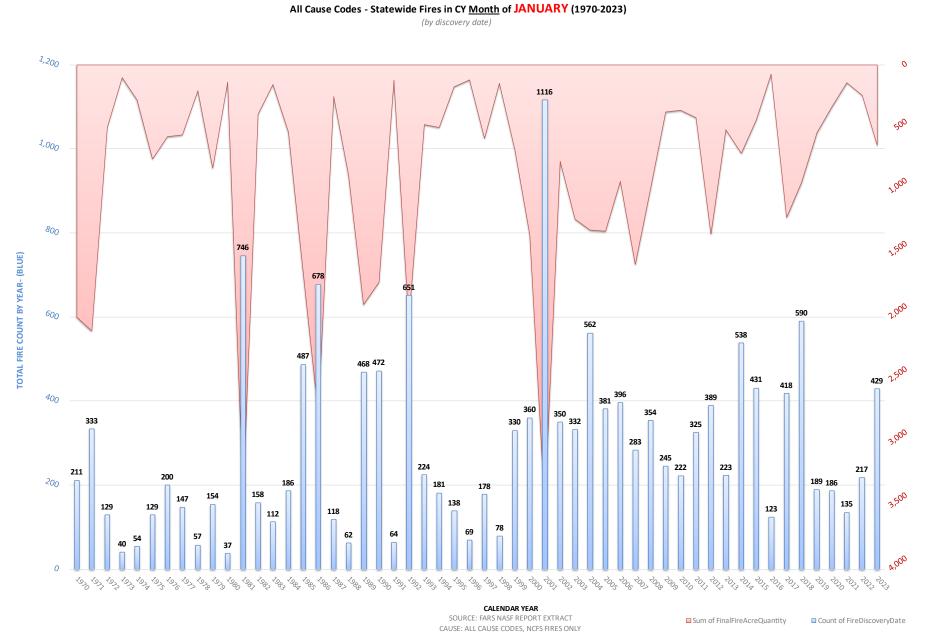
fiResponse Incident Location Map (for general context, preliminary data) **7-Day Activity**: 12/31 – 1/6, 2025

Report: Business Intelligence Module, Response Trends Map



NCFS – By Region							
MTD Fire Activity (Does Not Include Federal Ownerships)							
Data Source:	Data Source: Signal 14 Regional Activity Summary Report (Signal 14 is a daily snapshot in time)						
Date Range:	<mark>1/1 – 1/6, 2025</mark>						
Area	Wildfire	Wildfire	RX Count	RX Acres			
Area	Count	Acres	(State & Private)	(State & Private)			
R1	37	86.1	3	143			
R2	62	172.8	7	462			
R3	19	15.8	0	0			

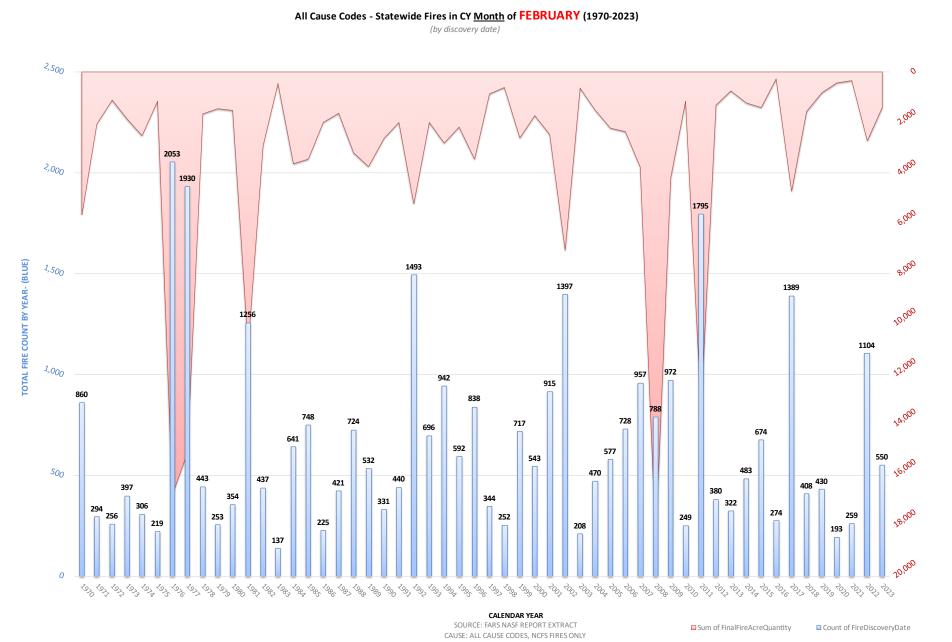




Distribution of All Fires & Acres for JANUARY from 1970 - 2023

TOTAL ACRES BURNED BY YEAR- (RED)

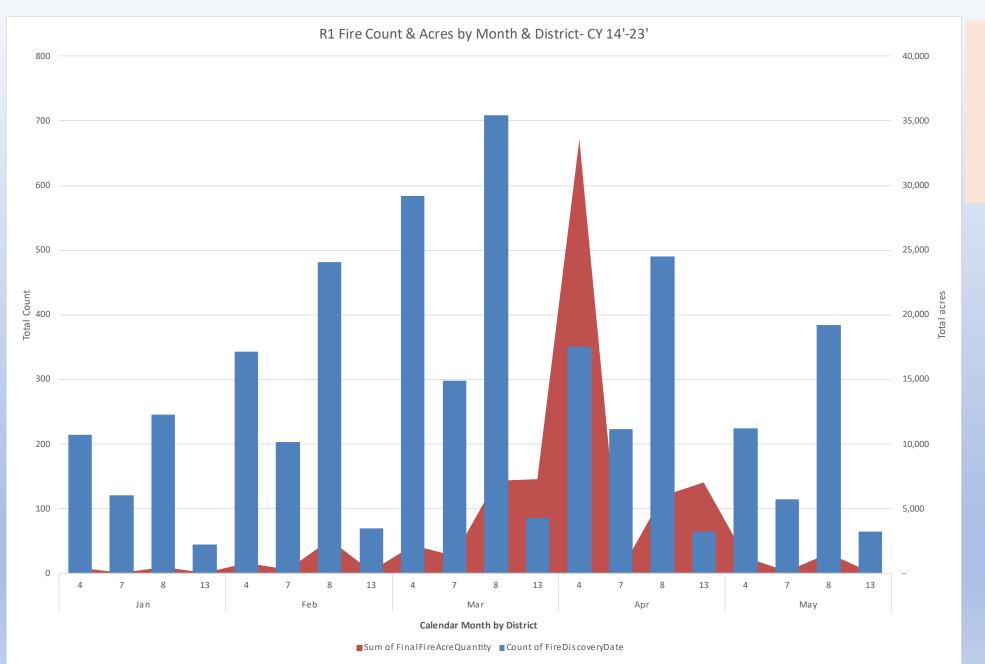
Cause: All Cause Codes, Statewide, NCFS Reported Fires Only



Distribution of All Fires & Acres for <u>FEBRUARY</u> from 1970 - 2023

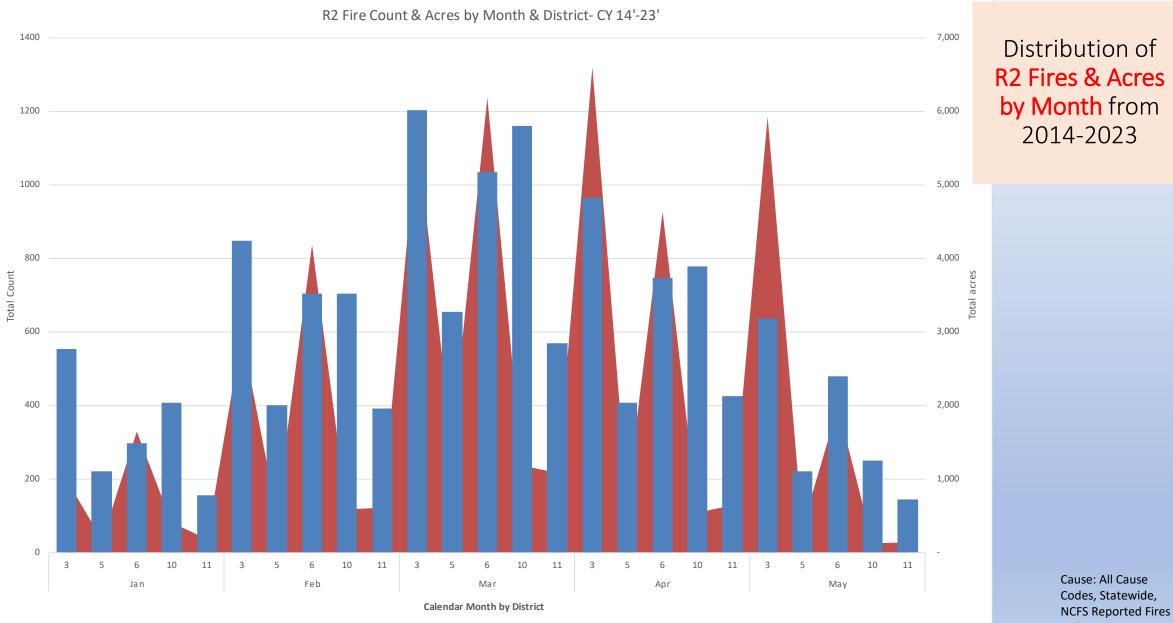
TOTAL ACRES BURNED BY YEAR- (RED)

Cause: All Cause Codes, Statewide, NCFS Reported Fires Only



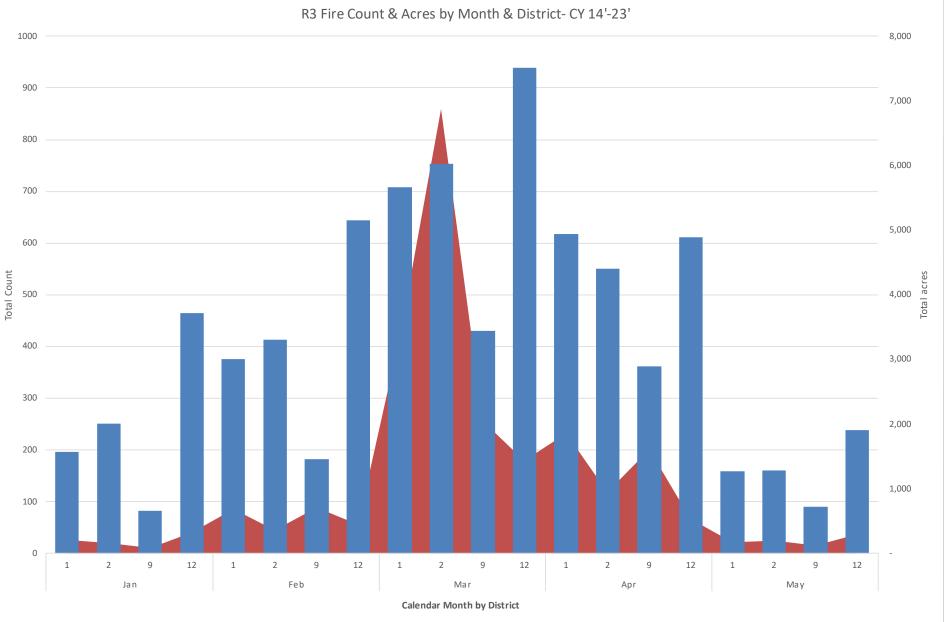
Distribution of R1 Fires & Acres by Month from 2014-2023

> Cause: All Cause Codes, Statewide, NCFS Reported Fires Only



[■] Sum of FinalFireAcreQuantity ■ Count of FireDiscoveryDate

Only



Sum of FinalFireAcreQuantity Count of FireDiscoveryDate

Cause: All Cause Codes, Statewide, NCFS Reported Fires Only

Distribution of R3 Fires & Acres by Month from 2014-2023



Watches, Warnings and Advisories

Winter Storm Watch for northern TX, southeast OK, much of AR and northwest LA

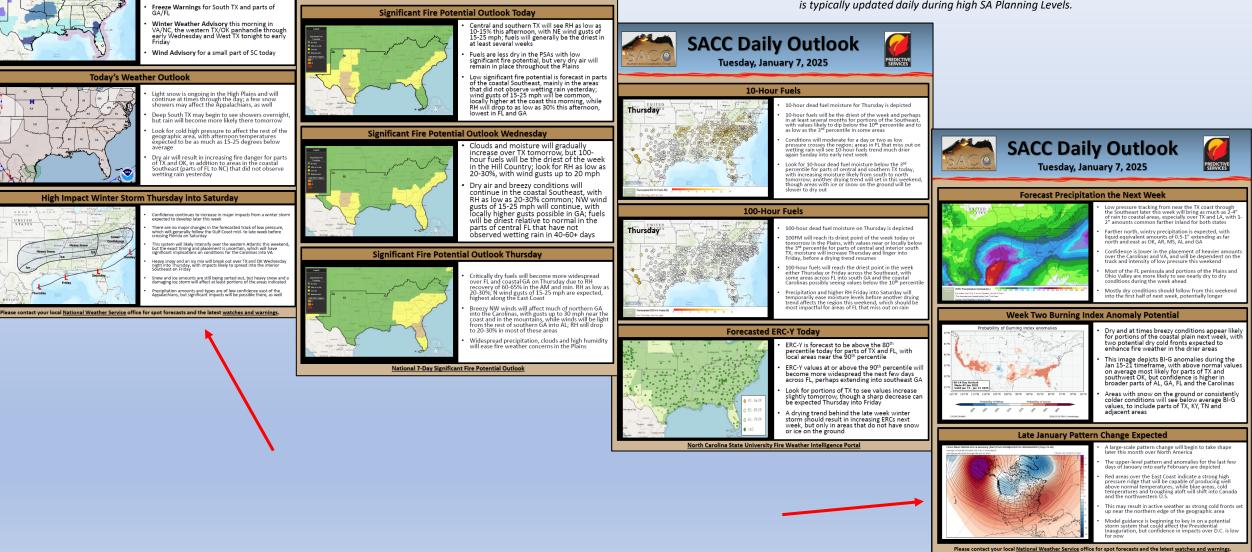
in addition to parts of VA

Cold Weather Advisories extent from TX to FL,

Southern Area Daily Outlook Page:

https://gacc.nifc.gov/sacc/resources/predictive/sacc-daily-outlook.pdf

Product provides weekly context for Southern Area (Tuesday - 1/7 Outlook shown) & is typically updated daily during high SA Planning Levels.



PREDICTIVE

SACC Daily Outlook

Tuesday, January 7, 2025

Fuels & Fire Danger

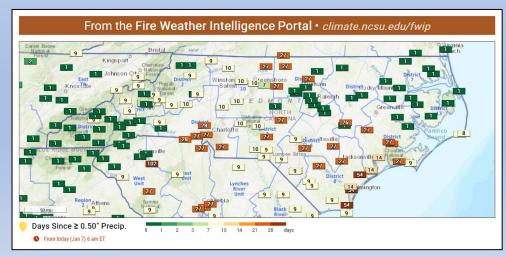
Drought conditions remain for much of NC, especially east. See the NC Climate Office graphic located at top-right relating to percent of normal precip for the Month of December. Several areas remain between 2-3+ weeks since a ≥ 0.50 " rainfall event, see map bottom-left. Western NC has seen more significant rainfall amounts and duration over the past several weeks along with terrain influenced snowfall. The Season Snowfall Accumulation map shows <u>cumulative</u> modeled accumulations since 9/30/24.

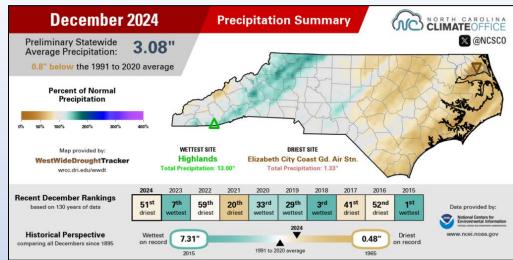
Duff & upper organic soil consumption remain a concern, corresponding reasonably well with the abnormally high KBDI value areas represented on slide #48. These cumulative drought related impacts lead to enhanced difficulty of control/mop-up & later reburn risk. Canal networks and swamp systems remain significantly drier than normal in these areas. Normal "natural barriers" may not be effective based on drought and storm related loading impacts. This will become very problematic in the Spring, should lack of significant rain continue. See slide #51 for updated NIFC fire potential maps for the next 4 months along with comments.

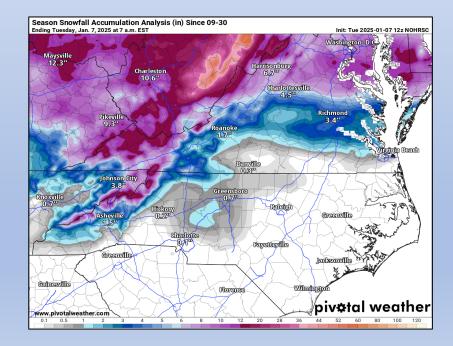
It is also important to note the <u>risk of prescribed fire reburn</u> & mop-up concerns in drought impacted areas, aligning with deep duff/abnormally heavy fuel loading/organic soils that are available for consumption.

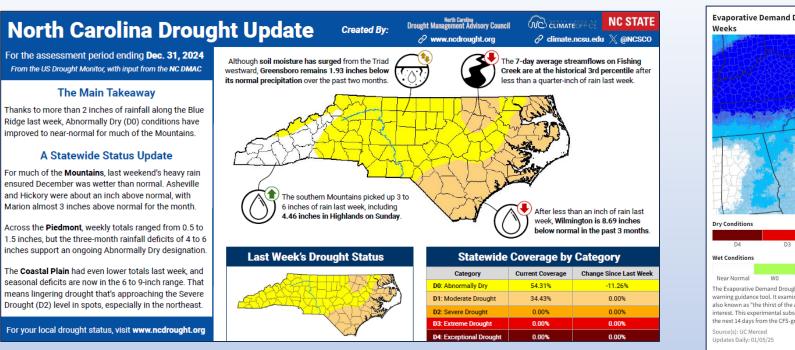
Live Fuels/Greenness – live fuels remain in seasonal dormant/cured status, also reflected in the NFDRS models. Note that daylength is slowly increasing each day, post Winter Solstice, which will provide more opportunity for fuel heating/drying as we move towards Spring.

Spells of very dry & cold air have been experienced over the past month. The return of very dry air will quickly cause small to medium sized dead fuels to dry out, especially where repeated poor overnight recovery happens. Continue to be watchful for situations where consecutive days of dry air aligns with increasing air temps & day length, vegetative dormancy, wind and heavy loading of drying storm debris as we progress further through the dormant season.







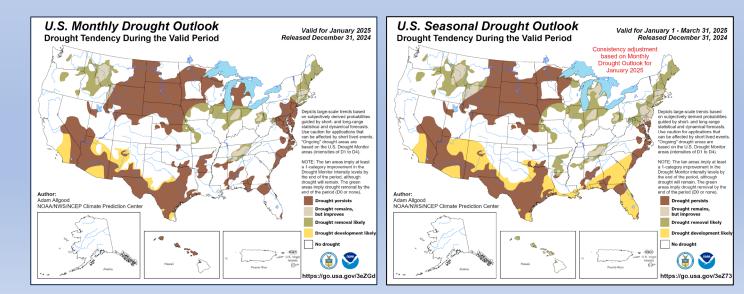


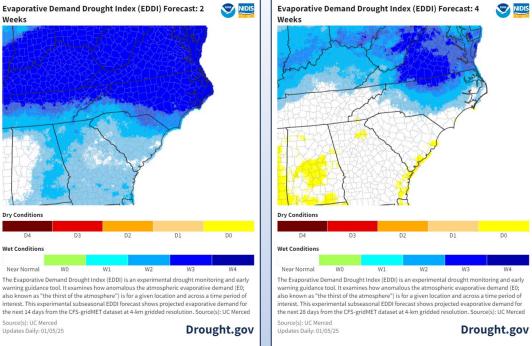
EDDI & Drought

EDDI Maps - The EDDI maps at the top right illustrate modeled evaporative demand at the two-week and four-week level. They represent influence of colder conditions and lower evaporative demand expected over the next several weeks before warming up again.

US Drought Monitor – USDM map released last week, note reduction of D0 conditions in SW Mountains last week (top left).

US Monthly & Seasonal Drought Outlook - released on 12/31/24, shown at right. See detailed state/regional discussions <u>here</u>. *All of this is dependent upon any future winter storm tracks and/or any La Nina associated impacts.*





Daily WIMS **Observations** and NFDRS Estimates

Averaged by FDRA SIG Group

This is available on the FWIP at: <u>https://products.climate.ncsu.edu/fwip/nfdrs.php?data=ob&state=NC</u>

- The averaged values are derived from the SIG Station Outputs for a particular FDRA (SIG station names shown in bold on the live link above)
- You can toggle the percentiles on/off, displaying below the actual calculated values percentiles are based on SIG station averages from analysis of "All Days" for entire calendar year range through 2021
- Herb & Woody Fuel Moisture Estimates derived from SIG Station Averages based on Station GSI Settings within WIMS, <u>not</u> live fuel moisture sampling. Actual green-up is variable across the landscape.

1/5/25 Observations

Daily WIMS Forecast Observations and NFDRS Estimates are also available

Averaged by FDRA SIG Group This is available on the FWIP at: <u>https://products.climate.ncsu.edu/fwip/nfdrs.php?data=fc</u>

						A	verages	by FDF	RA									
FDRA	STATION_COUNT	NFDR_DATE	BI	ERC	IC	SC	KBDI	1HR	10HR	100HR	1000HR	HRB	WOODY	TEMP	RH	WIND	PRECIP	DUR
Southern Highlands	3	2025-01-05	78.73 79.1%	36.20 83.4%	2.67 51.9%	34.43 74.7%	9.67	16.63 66.3%	11.52 3.9%	19.39 46.0%	24.53 97.5%	30.00	50.00	32.7⁰F	67.0%	ESE 3.0 mph	0.00 in.	0.0
Central Mountains	3	2025-01-05	86.97 80.5%	53.43 93.1%	4.23 63.0%	28.67 71.6%	75.33	13.19 46.9%	11.45 1.5%	19.70 62.9%	23.55 97.0%	30.00	50.00	34.3ºF	47.0%	E 0.7 mph	0.00 in.	0.0
Northern Highlands	2	2025-01-05	47.75 67.1%	26.40 72.9%	2.80 58.1%	16.60 63.8%	8.00	18.51 70.7%	11.73 5.2%	20.28 63.1%	23.47 91.2%	50.00	80.00	29.5°F	73.5%	SE 3.0 mph	0.00 in.	0.0
Blue Ridge Escarpment	3	2025-01-05	90.73 77.0%	58.53 94.9%	6.60 67.2%	28.97 69.6%	22.33	11.28 37.1%	10.69 5.2%	18.02 34.2%	22.02 78.2%	30.00	56.67	31.3ºF	61.3%	SE 1.0 mph	0.00 in.	0.0
Western Piedmont	3	2025-01-05	79.50 72.0%	60.00 93.9%	6.53 64.2%	20.77 62.0%	67.33	11.28 43.9%	11.61 6.6%	19.90 72.4%	23.11 94.8%	30.00	50.00	40.3°F	25.3%	SW 1.7 mph	0.00 in.	0.0
Sandhills	3	2025-01-05	47.90 81.7%	51.63 75.9%	7.30 44.7%	10.20 90.9%	203.00	10.18 32.4%	11.26 4.5%	19.66 68.3%	23.01 94.5%	36.67	63.33	43.7⁰ F	23.0%	E 1.0 mph	0.00 in.	0.0
Eastern Piedmont	4	2025-01-05	104.43 71.3%	62.50 93.1%	10.45 64.4%	36.68 57.6%	197.00	10.18 24.4%	11.61 7.7%	18.68 55.5%	22.79 95.6%	30.00	60.00	44.8°F	20.0%	NW 3.5 mph	0.00 in.	0.0
Southern Coastal	6	2025-01-05	79.95 64.6%	55.80 88.8%	7.85 66.0%	23.23 50.5%	413.33	10.57 35.5%	12.27 1.5%	19.62 60.0%	24.19 95.3%	50.00	90.00	49.8°F	19.2%	WSW 3.2 mph	0.00 in.	0.0
Northern Coastal	4	2025-01-05	94.40 73.2%	56.75 91.4%	9.45 67.0%	32.00 60.5%	387.75	10.41 22.0%	11.62 2.6%	18.90 52.8%	23.23 91.6%	50.00	90.00	46.3⁰F	19.8%	NW 6.0 mph	0.00 in.	0.0

BI/ERC/IC/SC 0 10 20 30 40 50 60 70 80 90 Percentiles (%) (based on all days through 2021)

Note impact of longer duration dry air, most significantly on the 10-hr dead fuels last Sunday (1/5). The 1/6/25 observations improved significantly in the 1 & 10 hr. timelag fuels categories.

Important notes for next slide group:

A. Current ERC, KBDI, BI, 10-Hr, 100-Hr & 1000-Hr Graphics:

- These are extracts from FF+ using daily observation data downloaded from WIMS
- Graphs run in calendar year format from Jan-Dec, note that 2025 data is shown as Magenta Dash-Dot while 2024 is shown in Green. With only a few day of data for CY25 it is hard to discern on some of the graphs.

B. Weekly Outlook - FDRA General Fire Danger Forecast Matrix:

- Available on the FWIP within the "<u>Resources for NCFS</u>" page.
- The operation link is: <u>https://products.climate.ncsu.edu/fwip/outlook.php</u>
- The matrix updates daily please review the tool notes below for more details.

Tool Summary:

The forecast matrix was created using standard NFDRS and weather forecast data:

- Weather conditions and NFDRS outputs are forecasted over the next 7 days by NWS for SIG stations in each FDRA.
- Weather variable ranges and breakpoints were defined by FDRA stakeholders and relate to Pocket Card notes.
- Maximum temperatures in the Critical range are color-coded with shades of red to help visually distinguish daily variations. The brightest red color corresponds to temperatures of 100°F or greater.

Fire danger forecast indices and component values are grouped into three categories based on historical percentiles, assessed using the FF+ All Days filter through 2021:

- Low to Moderate (0 to 74th percentile); shown in blue-green
- High (75th to 89th percentile); shown in yellow
- Very High to Extreme (90th+ percentile); shown in red and labeled as Critical

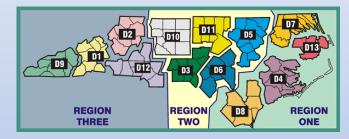
Dead fuel moisture forecast values are grouped into three categories based on historical percentiles, assessed using the FF+ All Days filter through 2021:

- Low to Moderate (26th to 100th percentile); shown in blue-gree
- High (11th to 25th percentile); shown in yellow
- Very High to Extreme (0 to 10th percentile); shown in red and labeled as Critical

Other Notes:

- Read the key and notes for each FDRA, included on the outlook matrix page.
- Forecasts are variable and can change significantly over a forecast cycle and across the landscape.
- · This is another tool for gaining better situational awareness, and should be used for general planning purposes only.
- The outlook matrix is refreshed when an FDRA is selected, using the most recent forecast data available at that time. The 7th day may
 drop off or display partial data prior to the afternoon/evening forecast update.
- Daily updates to NFDRS forecasts occur around 1530 daily, while general weather forecasts are updated around 1730 daily.





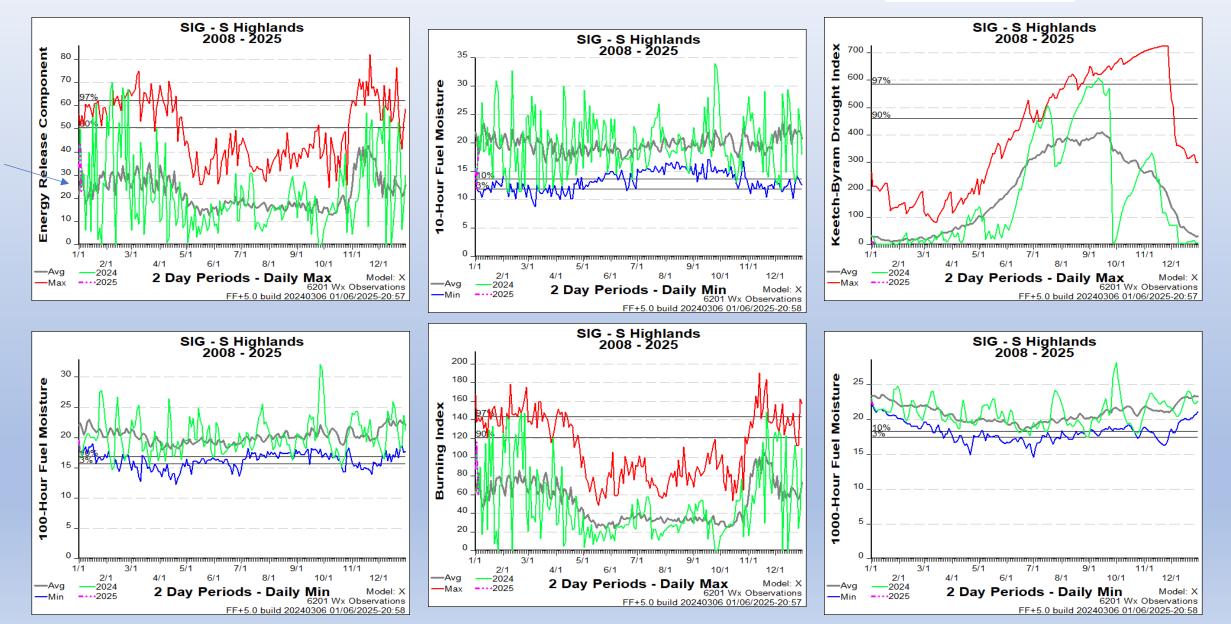
To reduce duplication & increase situational awareness, slides 11-34 are organized by FDRA in this order:

*(R3 = Region 3, R2 = Region 2, R1 = Region 1)

- Southern Highlands (R3)
- Central Mountains (R3)
- Northern Highlands (R3)
- Blue Ridge Escarpment (R2 & R3)
- Western Piedmont (R2 & R3)
- Eastern Piedmont (R2)
- Sandhills (R2)
- North Coast (R1)
- South Coast (R1 & R2)

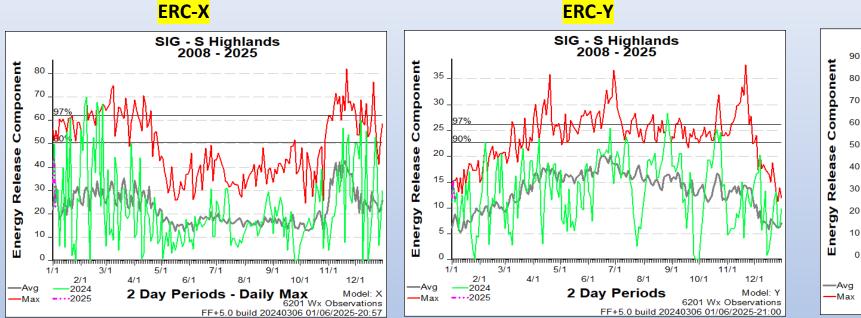


FDRA – Southern Highlands

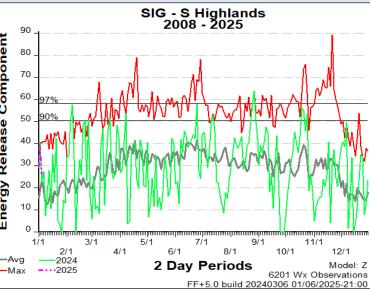


FDRA – <mark>Southern Highlands</mark>





ERC-Z



Comparison of ERC by NFDRS Fuel Model

X: 1's, 10's, Live Component (GSI driven); + Drought Loading

Y: Heavily weighted on 1000's, less on smaller dead; No live; + Drought Loading

Z: Near even distribution between the four dead size classes of 1's, 10's, 100's, 1000's; No live; + Drought Loading

Average, Max, CY Year 2024 are displayed along with Year-to-Date 2025

Southern Highlands FDRA - General Fire Danger Forecast

For planning purposes only; forecast is subject to change

Four or more RED blocks in a day signals	the potential for a Critical Fire Day
---	---------------------------------------

DAY	TUE	WED	THU	FRI	SAT	SUN	MON
DAT .	07-Jan	08-Jan	09-Jan	10-Jan	11-Jan	12-Jan	13-Jan
Avg. Max. Temp. (°F)	36	34	32	35	36	39	
Avg. Min. Humidity (%)	41	38	30	38	60	59	
Avg. 20' Wind Speed (mph)	7	4	6	2	5	3	
Avg. Wind Direction*	NNW	NNW	NNW	SSE	WNW	W	
Avg. Probability of Precip. (%)	1	0	3	62	37	14	
Days Since a Wetting Rain**	1.0	2.0	3.0				
Forecast ERC (Fuel Model X)	35.1	41.3	48.5	57.3	30.3	31.2	32.9
Forecast BI (Fuel Model X)	88.0	95.2	109.8	106.0	84.7	76.4	91.7
Forecast IC (Fuel Model X)	2.4	3.2	4.6	6.8	1.6	1.4	1.8
Forecast 100-Hr. FMC	19.4	19.3	19.0	18.6	18.1	17.9	17.5
Forecast 1000-Hr. FMC	24.5	24.6	24.6	24.6	24.6	24.5	24.4
KBDI	0.0						

Data Source:

- Weather forecasts come from the National Weather Service's <u>Digital Forecast Database</u>. The wind speed and
 direction, and probability of precipitation, are calculated as averages of the 1 am, 7 am, 1 pm, and 7 pm
 forecasts. The 20-foot wind speed is estimated from the 10-meter forecast using the log wind profile method.
- Days since a wetting rain is calculated using a combination of historical data (to determine the most recent
 wetting rain event) and forecasted precipitation amounts. These forecasted amounts are only available for the
 first three days of the forecast period.
- Fire danger forecasts for the next 7 days are issued by National Weather Service through WIMS. KBDI is only
 available on the first forecast day since the <u>NEDRS Forecast</u> product does not include precipitation amounts,
 which are used to adjust KBDI from day to day

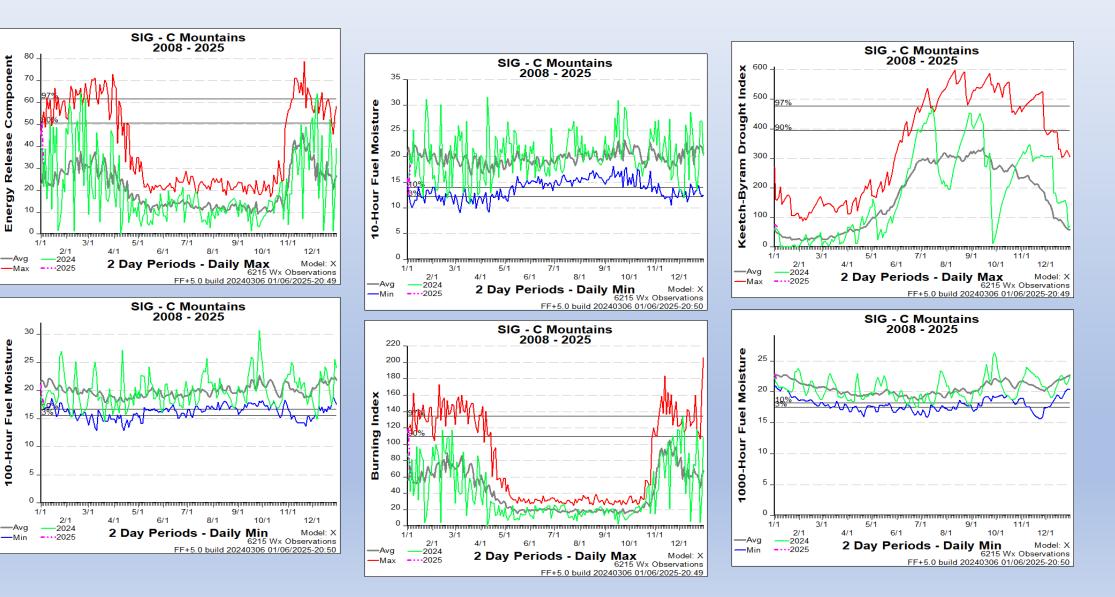
Values in the table above are averages from 3 stations in this FDRA:

- Tusquitee (315602)
- Locust Gap (315802)
- Highlands (315803)

KEY	Low to Moderate Burning Conditions	Burning Conditions Can be High CAUTION	Burning Conditions Can be Critical WATCH OUT!			
Avg. Max. Temp.	Less than 50°F	Between 50°F and 55°F	Greater than 55°F			
Avg. Min. Humidity	Greater than 35%	Between 30% and 35%	Less than 30%			
Avg. 20' Wind Speed	Less than 5 mph	Between 5 mph and 7 mph	Greater than 7 mph			
Avg. Wind Direction* Criticality of wind direction is highly dependent on burn operations and/or structures threatened.						
Days Since a Wetting Rain**	A wetting rain is define	ed as 0.10" or greater. This is an avera	ge of the FDRA stations noted abov			
Energy Release Comp.	Less than 40	Between 40 and 52	Greater than 52			
Burning Index	Less than 95	Between 95 and 118	Greater than 118			
Ignition Component	Less than 9	Between 9 and 14	Greater than 14			
100-Hour Fuel Moisture	Greater than 18%	Between 17% and 18%	Less than 17%			
1000-Hour Fuel Moisture	Greater than 19%	Between 18% and 19%	Less than 18%			
KBDI	Less than 345	Between 345 and 479	Greater than 479			

FDRA – Central Mountains





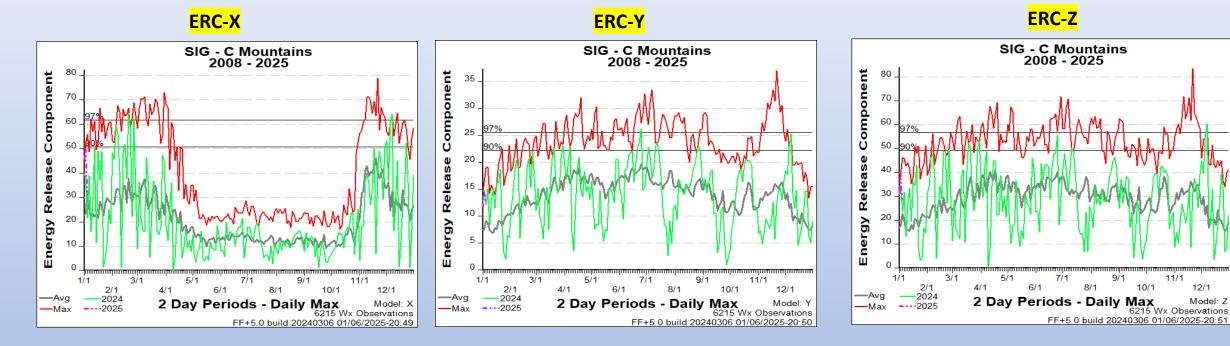
FDRA – Central Mountains



11/1

12/1

Model: Z



Comparison of ERC by NFDRS Fuel Model

X: 1's, 10's, Live Component (GSI driven); + Drought Loading

Y: Heavily weighted on 1000's, less on smaller dead; No live; + Drought Loading

Z: Near even distribution between the four dead size classes of 1's, 10's, 100's, 1000's; No live; + Drought Loading

Average, Max, CY Year 2024 are displayed along with Year-to-Date 2025

Central Mountains FDRA - General Fire Danger Forecast

For planning purposes only; forecast is subject to change

Four or more **RED** blocks in a day signals the potential for a **Critical Fire Day**

DAY	TUE 07-Jan	WED 08-Jan	THU 09-Jan	FRI 10-Jan	SAT 11-Jan	SUN 12-Jan	MON 13-Jan
Avg. Max. Temp. (°F)	37	38	34	41	40	43	
Avg. Min. Humidity (%)	40	40	31	32	55	55	
Avg. 20' Wind Speed (mph)	9	4	6	2	5	3	
Avg. Wind Direction*	NNW	NNW	NNW	SW	NW	WNW	
Avg. Probability of Precip. (%)	4	0	2	59	45	13	
Days Since a Wetting Rain**	1.0	2.0	3.0				
Forecast ERC (Fuel Model X)	32.7	40.5	46.7	57.8	39.0	35.4	36.2
Forecast BI (Fuel Model X)	98.1	91.5	117.2	100.7	97.1	76.9	87.3
Forecast IC (Fuel Model X)	2.3	2.9	4.4	6.8	2.4	1.6	1.9
Forecast 100-Hr. FMC	19.4	19.2	18.8	18.4	17.9	17.5	17.1
Forecast 1000-Hr. FMC	23.6	23.6	23.6	23.6	23.6	23.6	23.5
KBDI	64.0						

Data Source:

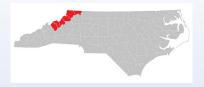
- Weather forecasts come from the National Weather Service's <u>Digital Forecast Database</u>. The wind speed and direction, and probability of precipitation, are calculated as averages of the 1 am, 7 am, 1 pm, and 7 pm forecasts. The 20-foot wind speed is estimated from the 10-meter forecast using the log wind profile method.
- Days since a wetting rain is calculated using a combination of historical data (to determine the most recent wetting rain event) and forecasted precipitation amounts. These forecasted amounts are only available for the first three days of the forecast period.
- Fire danger forecasts for the next 7 days are issued by National Weather Service through WIMS. KBDI is only available on the first forecast day since the <u>NFDRS Forecast</u> product does not include precipitation amounts, which are used to adjust KBDI from day to day

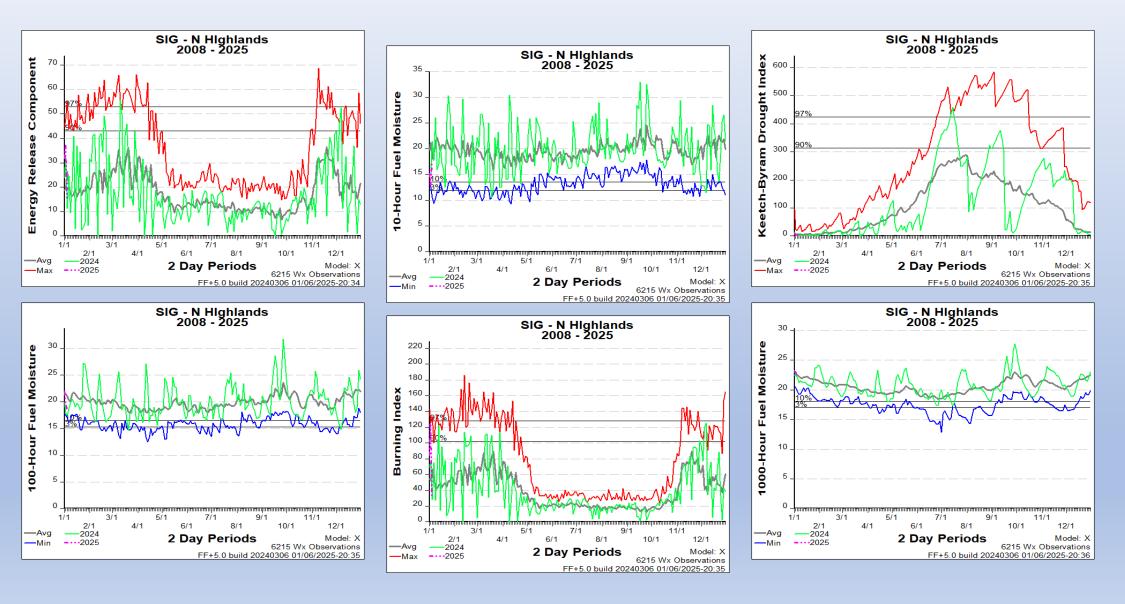
Values in the table above are averages from 3 stations in this FDRA:

- 7 Mile Ridge (313302)
- Davidson River (316001)
- Mtn Horticultural Crops Res Stn (316141)

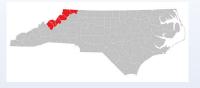
KEY	Low to Moderate Burning Conditions	Burning Conditions Can be High CAUTION	Burning Conditions Can be Critical WATCH OUT!			
Avg. Max. Temp.	Less than 50°F	Between 50°F and 60°F	Greater than 60°F			
Avg. Min. Humidity	Greater than 35%	Between 30% and 35%	Less than 30%			
Avg. 20' Wind Speed	Less than 5 mph	Between 5 mph and 10 mph	Greater than 10 mph			
vg. Wind Direction* Criticality of wind direction is highly dependent on burn operations and/or structures threatened.						
Days Since a Wetting Rain**	A wetting rain is defined as 0.10" or greater. This is an average of the FDRA stations noted above.					
Energy Release Comp.	Less than 33	Between 33 and 50	Greater than 50			
Burning Index	Less than 78	Between 78 and 106	Greater than 106			
Ignition Component	Less than 6	Between 6 and 11	Greater than 11			
100-Hour Fuel Moisture	Greater than 19%	Between 17% and 19%	Less than 17%			
1000-Hour Fuel Moisture	Greater than 20%	Between 19% and 20%	Less than 19%			
KBDI	Less than 319	Between 319 and 417	Greater than 417			

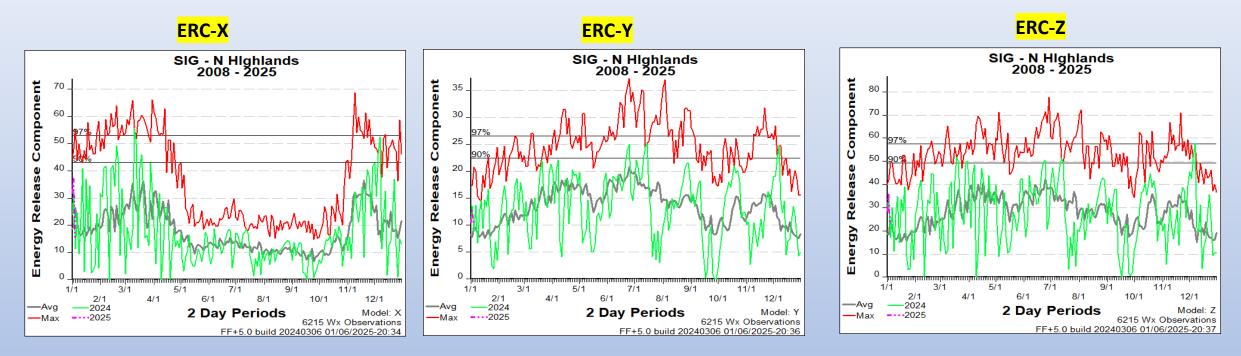
FDRA – Northern Highlands





FDRA – Northern Highlands





 Comparison of ERC by NFDRS Fuel Model

 X: 1's, 10's, Live Component (GSI driven); + Drought Loading

 Y: Heavily weighted on 1000's, less on smaller dead; No live; + Drought Loading

 Z: Near even distribution between the four dead size classes of 1's, 10's, 100's, 1000's; No live; + Drought Loading

 Average, Max, CY Year 2024 are displayed along with Year-to-Date 2025

Northern Highlands FDRA - General Fire Danger Forecast

For planning purposes only; forecast is subject to change

DAY	TUE 07-Jan	WED 08-Jan	THU 09-Jan	FRI 10-Jan	SAT 11-Jan	SUN 12-Jan	MON 13-Jan
Avg. Max. Temp. (°F)	32	32	26	37	36	37	
Avg. Min. Humidity (%)	48	47	45	36	68	61	
Avg. 20' Wind Speed (mph)	14	10	11	5	7	6	
Avg. Wind Direction*	NW	NW	NW	W	WNW	WNW	
Avg. Probability of Precip. (%)	1	0	1	57	36	11	
Days Since a Wetting Rain**	1.0	2.0	3.0				
Forecast ERC (Fuel Model X)	21.9	34.9	35.3	42.0	26.7	24.7	22.6
Forecast BI (Fuel Model X)	73.4	90.0	99.5	84.5	70.0	57.9	59.3
Forecast IC (Fuel Model X)	2.2	4.3	4.3	5.3	2.2	1.7	1.7
Forecast 100-Hr. FMC	19.8	19.6	19.3	18.9	18.5	18.0	17.6
Forecast 1000-Hr. FMC	23.5	23.5	23.5	23.5	23.5	23.5	23.5
KBDI	0.0						

Four or more **RED** blocks in a day signals the potential for a **Critical Fire Day**

Data Source:

- Weather forecasts come from the National Weather Service's Digital Forecast Database. The wind speed and direction, and probability of precipitation, are calculated as averages of the 1 am, 7 am, 1 pm, and 7 pm forecasts. The 20-foot wind speed is estimated from the 10-meter forecast using the log wind profile method.
- Days since a wetting rain is calculated using a combination of historical data (to determine the most recent wetting rain event) and forecasted precipitation amounts. These forecasted amounts are only available for the first three days of the forecast period.
- Fire danger forecasts for the next 7 days are issued by National Weather Service through WIMS. KBDI is only available on the first forecast day since the NFDRS Forecast product does not include precipitation amounts, which are used to adjust KBDI from day to day

Burning Conditions Can be

High

CAUTION

Between 50°F and 58°F

Between 30% and 35%

Between 2 mph and 5 mph

Between 26 and 46

Between 67 and 108

Between 5 and 9

Between 17% and 18%

Between 19% and 20%

Between 192 and 330

Other factors to consider when determining fire danger: sky conditions, precipitation amount, number of days since rain,

Criticality of wind direction is highly dependent on burn operations and/or structures threatened.

A wetting rain is defined as 0.10" or greater. This is an average of the FDRA stations noted above.

Burning Conditions Can be

Critical

WATCH OUT!

Greater than 58°F

Less than 30%

Greater than 5 mph

Greater than 46

Greater than 108

Greater than 9

Less than 17%

Less than 19%

Greater than 330

Values in the table above are averages from 3 stations in this FDRA:

Low to Moderate

Burning Condition

Less than 50°F

Greater than 35%

Less than 2 mph

Less than 26

Less than 67

Less than 5

Greater than 18%

Greater than 20%

Less than 192

- Laurel Springs (310101)
- Upper Mountain Research Stn (310141)
- Busick (313402)

Avg. Max. Temp.

Avg. Min. Humidity

Avg. 20' Wind Speed

Avg. Wind Direction*

Energy Release Comp.

Ignition Component

100-Hour Fuel Moisture

1000-Hour Fuel Moisture

Burning Index

KBDI

and season

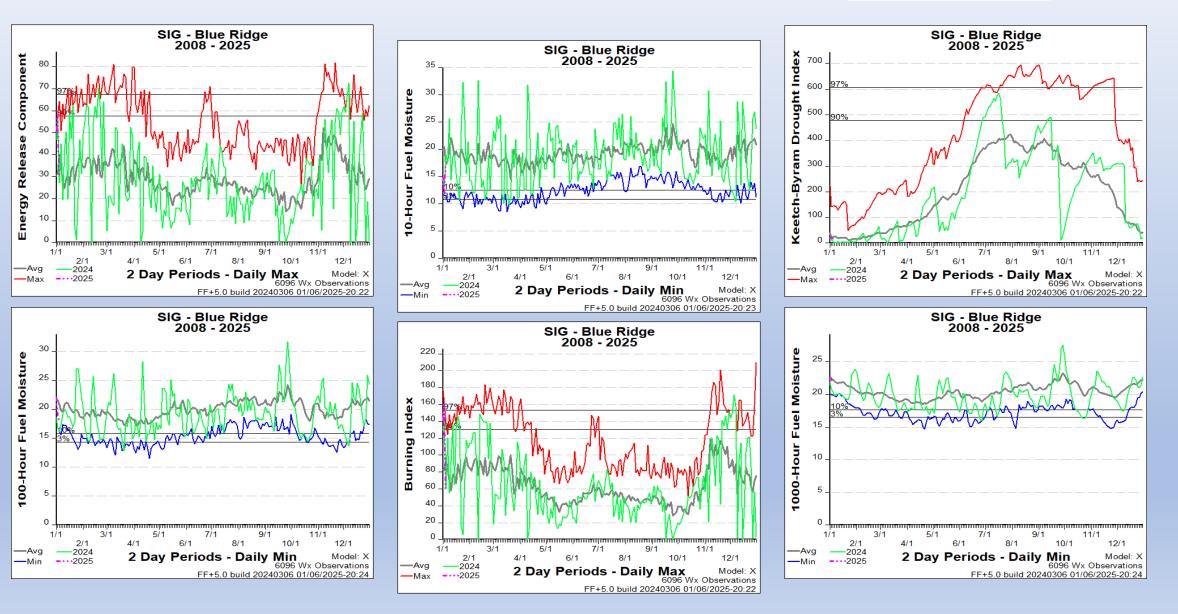
Days Since a Wetting Rain**

KEY

0-74 th ; 75-89 th ; 90 th + (Indices)
26-100 th ; 11-25 th ; 0-10 th (Fuel Moisture)

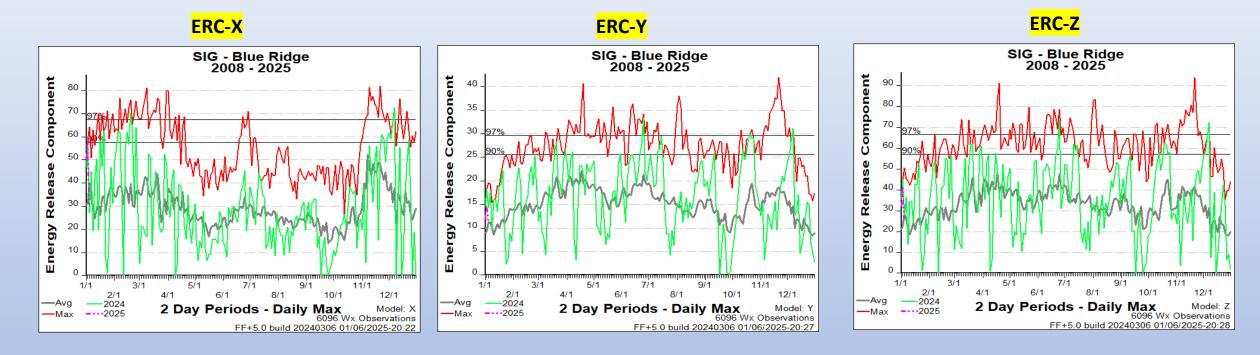
FDRA – Blue Ridge Escarpment





FDRA – Blue Ridge Escarpment





Comparison of ERC by NFDRS Fuel Model X: 1's, 10's, Live Component (GSI driven); + Drought Loading Y: Heavily weighted on 1000's, less on smaller dead; No live; + Drought Loading Z: Near even distribution between the four dead size classes of 1's, 10's, 100's, 1000's; No live; + Drought Loading

Average, Max, CY Year 2024 are displayed along with Year-to-Date 2025

Blue Ridge Escarpment FDRA - General Fire Danger Forecast

For planning purposes only; forecast is subject to change

DAY	TUE 07-Jan	WED 08-Jan	THU 09-Jan	FRI 10-Jan	SAT 11-Jan	SUN 12-Jan	MON 13-Jan
Avg. Max. Temp. (°F)	39	38	33	39	40	40	
Avg. Min. Humidity (%)	36	36	33	34	53	54	
Avg. 20' Wind Speed (mph)	9	4	6	3	4	3	
Avg. Wind Direction*	NW	NW	NW	W	NW	W	
Avg. Probability of Precip. (%)	1	0	1	54	39	11	
Days Since a Wetting Rain**	1.0	2.0	3.0				
Forecast ERC (Fuel Model X)	34.1	44.5	48.6	52.9	35.4	35.9	33.2
Forecast BI (Fuel Model X)	89.7	88.4	108.4	89.8	79.4	77.1	78.8
Forecast IC (Fuel Model X)	2.8	3.8	5.1	5.1	2.1	2.1	2.0
Forecast 100-Hr. FMC	17.6	17.3	16.8	16.2	15.6	15.3	14.9
Forecast 1000-Hr. FMC	21.4	21.2	20.9	20.7	20.3	20.0	19.7
KBDI	10.3						

Four or more **RED** blocks in a day signals the potential for a **Critical Fire Day**

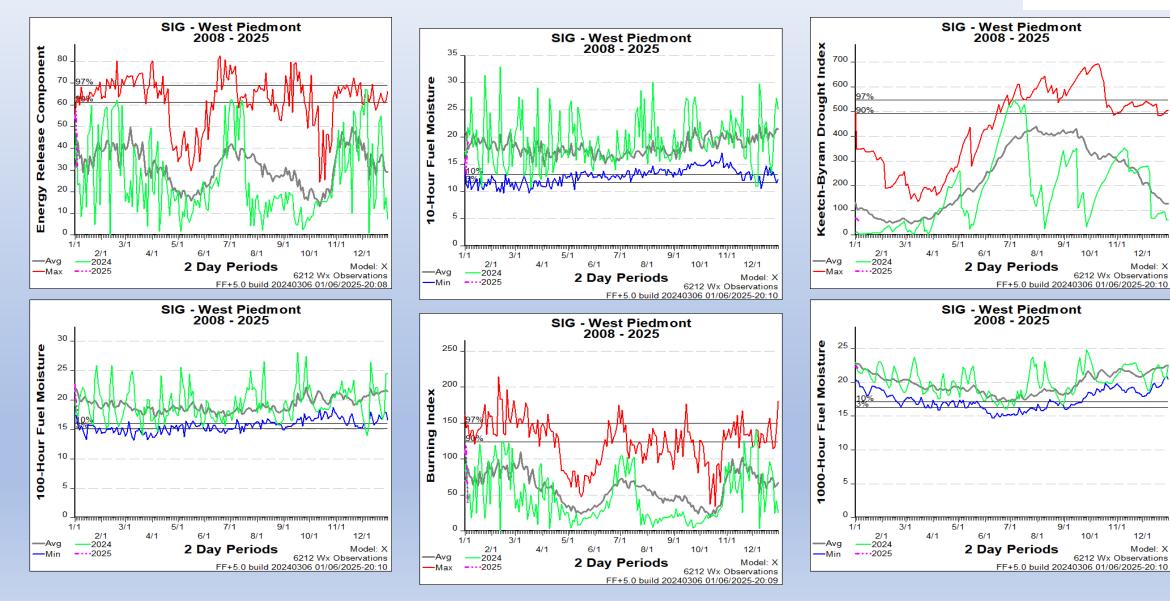
Data Source:

- Weather forecasts come from the National Weather Service's <u>Digital Forecast Database</u>. The wind speed and direction, and probability of precipitation, are calculated as averages of the 1 am, 7 am, 1 pm, and 7 pm
- forecasts. The 20-foot wind speed is estimated from the 10-meter forecast using the log wind profile method.
 Days since a wetting rain is calculated using a combination of historical data (to determine the most recent wetting rain event) and forecasted precipitation amounts. These forecasted amounts are only available for the first three days of the forecast period.
- Fire days of the locate period.
 Fire darger forecasts for the next 7 days are issued by National Weather Service through WIMS. KBDI is only available on the first forecast day since the <u>NFDRS Forecast</u> product does not include precipitation amounts, which are used to adjust KBDI from day to day
- Values in the table above are averages from 3 stations in this FDRA:
- Rendezvous Mtn. (312001)
- North Cove Pinnacle (fr1) (314301)
 Rutherford County (316302)

KEY	Low to Moderate Burning Conditions	Burning Conditions Can be High CAUTION	Burning Conditions Can be Critical WATCH OUT!				
Avg. Max. Temp.	Less than 40°F	Between 40°F and 50°F	Greater than 50°F				
Avg. Min. Humidity	Greater than 35%	Between 30% and 35%	Less than 30%				
Avg. 20' Wind Speed	Less than 2 mph	Between 2 mph and 4 mph	Greater than 4 mph				
Avg. Wind Direction*	Criticality of wind direction is highly dependent on burn operations and/or structures threatened.						
Days Since a Wetting Rain**	A wetting rain is defined as 0.10" or greater. This is an average of the FDRA stations noted above.						
Energy Release Comp.	Less than 52	Between 52 and 62	Greater than 62				
Burning Index	Less than 116	Between 116 and 136	Greater than 136				
Ignition Component	Less than 14	Between 14 and 20	Greater than 20				
100-Hour Fuel Moisture	Greater than 18%	Between 16% and 18%	Less than 16%				
1000-Hour Fuel Moisture	Greater than 19%	Between 18% and 19%	Less than 18%				
KBDI	Less than 351	Between 351 and 508	Greater than 508				
Other factors to consider when determining fire danger: sky conditions, precipitation amount, number of days since rain, and season							

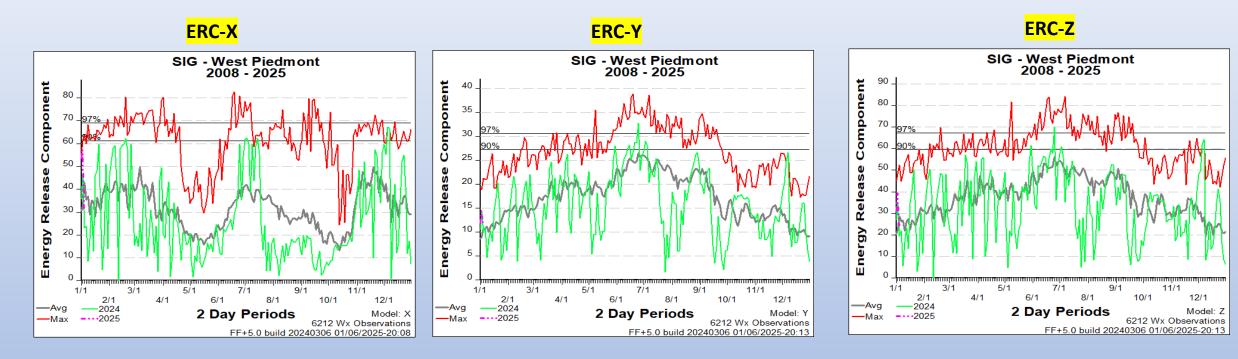
FDRA – Western Piedmont





FDRA – Western Piedmont





Western Piedmont FDRA - General Fire Danger Forecast

For planning purposes only; forecast is subject to change

DAY	TUE 07-Jan	WED 08-Jan	THU 09-Jan	FRI 10-Jan	SAT 11-Jan	SUN 12-Jan	MON 13-Jan
Avg. Max. Temp. (°F)	41	39	36	42	41	42	
Avg. Min. Humidity (%)	42	40	33	36	63	55	
Avg. 20' Wind Speed (mph)	7	2	5	2	4	3	
Avg. Wind Direction*	NNW	NW	NNW	W	W	W	
Avg. Probability of Precip. (%)	0	0	1	52	38	8	
Days Since a Wetting Rain**	1.0	2.0	3.0				
Forecast ERC (Fuel Model X)	27.7	40.2	45.0	48.5	31.0	28.6	28.2
Forecast BI (Fuel Model X)	77.1	71.9	106.5	69.1	67.6	58.6	62.4
Forecast IC (Fuel Model X)	1.7	2.3	3.8	2.9	1.2	1.0	1.1
Forecast 100-Hr. FMC	19.2	19.0	18.6	18.1	17.5	17.1	16.8
Forecast 1000-Hr. FMC	23.1	23.1	23.1	23.1	23.1	23.1	23.0
KBDI	47.7						

Four or more **RED** blocks in a day signals the potential for a **Critical Fire Day**

Data Source:

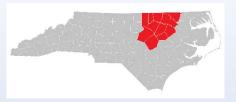
- Weather forecasts come from the National Weather Service's <u>Digital Forecast Database</u>. The wind speed and direction, and probability of precipitation, are calculated as averages of the 1 am, 7 am, 1 pm, and 7 pm forecasts. The 20-foot wind speed is estimated from the 10-meter forecast using the log wind profile method.
- Days since a wetting rain is calculated using a combination of historical data (to determine the most recent
 wetting rain event) and forecasted precipitation amounts. These forecasted amounts are only available for the
 first three days of the forecast period.
- Fire danger forecasts for the next 7 days are issued by National Weather Service through WIMS. KBDI is only
 available on the first forecast day since the <u>NFDRS Forecast</u> product does not include precipitation amounts,
 which are used to adjust KBDI from day to day

Values in the table above are averages from 3 stations in this FDRA:

- Duke Forest (312501)
- Lexington (314602)
- Mt. Island Lake (316602)

KEY	Low to Moderate Burning Conditions	Burning Conditions Can be High CAUTION	Burning Conditions Can be Critical WATCH OUT!	
Avg. Max. Temp.	Less than 40°F	Between 40°F and 50°F	Greater than 50°F	
Avg. Min. Humidity	Greater than 35%	Between 30% and 35%	Less than 30%	
Avg. 20' Wind Speed	Less than 2 mph	Between 2 mph and 4 mph	Greater than 4 mph	
Avg. Wind Direction*	Criticality of wind dire	ction is highly dependent on burn ope	erations and/or structures threatene	
Days Since a Wetting Rain**	A wetting rain is define	ed as 0.10" or greater. This is an avera	ge of the FDRA stations noted abov	
Energy Release Comp.	Less than 40	Between 40 and 52	Greater than 52	
Burning Index	Less than 95	Between 95 and 120	Greater than 120	
Ignition Component	Less than 9	Between 9 and 14	Greater than 14	
100-Hour Fuel Moisture	Greater than 18%	Between 17% and 18%	Less than 17%	
1000-Hour Fuel Moisture	Greater than 19%	Between 18% and 19%	Less than 18%	
KBDI	Less than 344	Between 344 and 479	Greater than 479	

FDRA – Eastern Piedmont



11/1

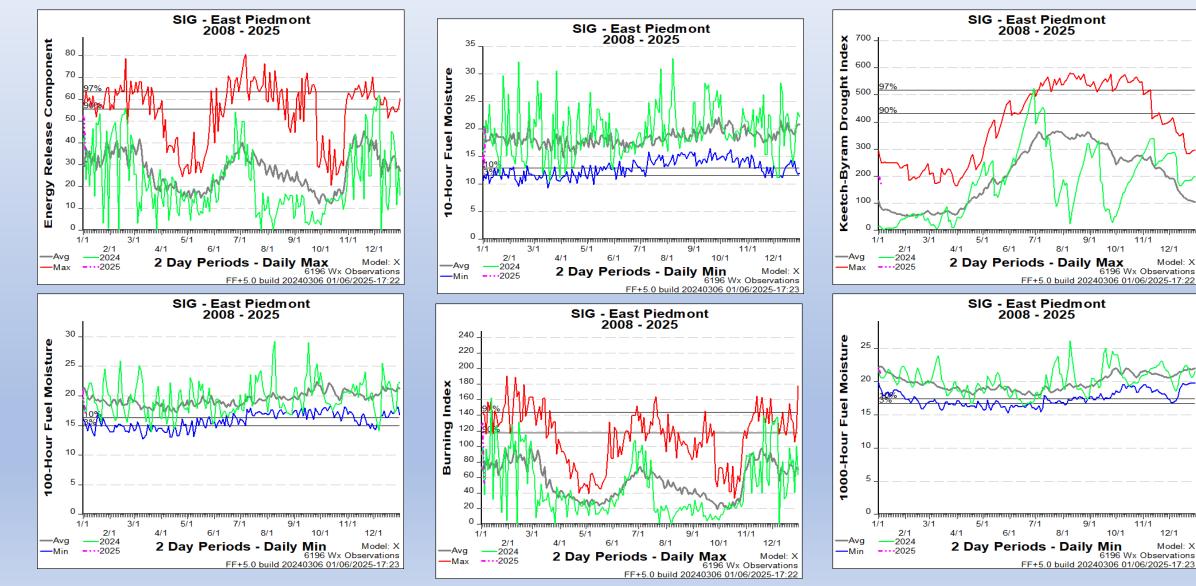
11/1

12/1

Model: X

12/1

Model: X



Eastern Piedmont FDRA - General Fire Danger Forecast

For planning purposes only; forecast is subject to change

DAY	TUE 07-Jan	WED 08-Jan	THU 09-Jan	FRI 10-Jan	SAT 11-Jan	SUN 12-Jan	MON 13-Jan
Avg. Max. Temp. (°F)	40	38	36	43	41	43	
Avg. Min. Humidity (%)	48	42	34	34	69	52	
Avg. 20' Wind Speed (mph)	8	4	7	3	4	4	
Avg. Wind Direction*	NNW	NW	NW	WNW	WSW	NW	
Avg. Probability of Precip. (%)	0	0	0	48	41	7	
Days Since a Wetting Rain**	1.0	2.0	3.0				
Forecast ERC (Fuel Model X)	18.8	35.8	40.7	43.3	25.8	24.8	25.0
Forecast BI (Fuel Model X)	67.5	74.0	117.0	62.0	65.0	55.3	59.7
Forecast IC (Fuel Model X)	1.4	2.5	4.3	2.4	1.2	1.0	1.1
Forecast 100-Hr. FMC	18.6	18.6	18.6	18.2	17.9	17.3	17.0
Forecast 1000-Hr. FMC	22.7	22.7	22.6	22.6	22.5	22.4	22.4
KBDI	131.5						

Four or more **RED** blocks in a day signals the potential for a **Critical Fire Day**

Data Source:

- Weather forecasts come from the National Weather Service's <u>Digital Forecast Database</u>. The wind speed and direction, and probability of precipitation, are calculated as averages of the 1 am, 7 am, 1 pm, and 7 pm forecasts. The 20-foot wind speed is estimated from the 10-meter forecast using the log wind profile method.
- Days since a wetting rain is calculated using a combination of historical data (to determine the most recent
 wetting rain event) and forecasted precipitation amounts. These forecasted amounts are only available for the
 first three days of the forecast period.
- Fire danger forecasts for the next 7 days are issued by National Weather Service through WIMS. KBDI is only available on the first forecast day since the <u>NFDRS Forecast</u> product does not include precipitation amounts, which are used to adjust KBDI from day to day

Values in the table above are averages from 4 stations in this FDRA:

- Oxford Tobacco Research Stn (310841)
- Upper Coastal Plain Res Stn (312940)
- Lake Wheeler Rd Field Lab (314941)
- Central Crops Research Station (317441)

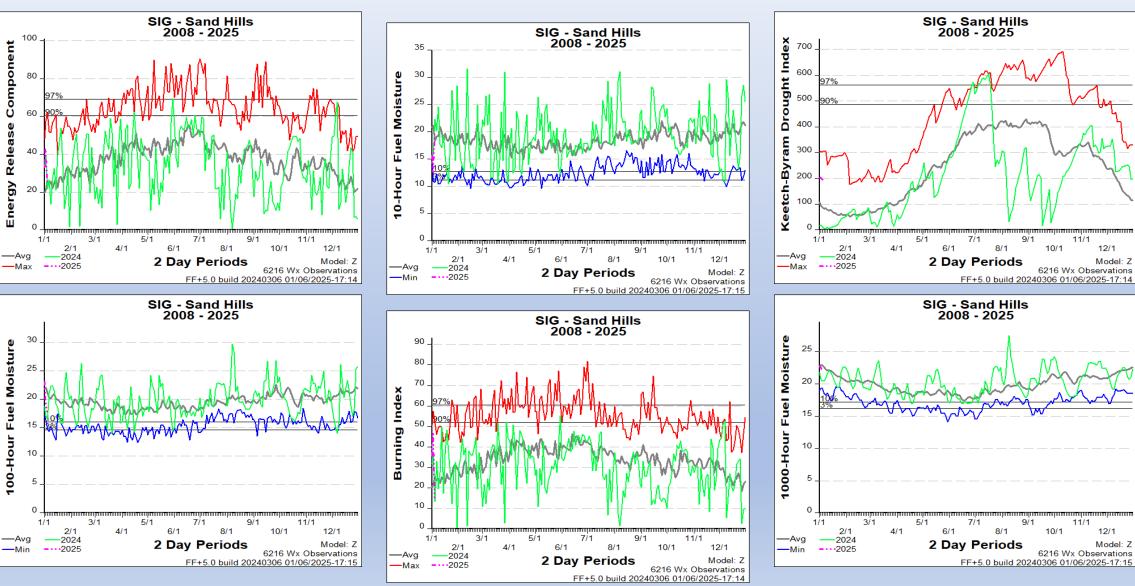
KEY	Low to Moderate Burning Conditions	Burning Conditions Can be High CAUTION	Burning Conditions Can be Critical WATCH OUT!
Avg. Max. Temp.	Less than 50°F	Between 50°F and 60°F	Greater than 60°F
Avg. Min. Humidity	Greater than 40%	Between 35% and 40%	Less than 35%
Avg. 20' Wind Speed	Less than 10 mph	Between 10 mph and 15 mph	Greater than 15 mph
Avg. Wind Direction*	Criticality of wind dire	ction is highly dependent on burn ope	rations and/or structures threatene
Days Since a Wetting Rain**	A wetting rain is defin	ed as 0.10" or greater. This is an averag	ge of the FDRA stations noted abov
Energy Release Comp.	Less than 54.2	Between 54.2 and 61.7	Greater than 61.7
Burning Index	Less than 109.3	Between 109.3 and 130.5	Greater than 130.5
Ignition Component	Less than 12.7	Between 12.7 and 16.8	Greater than 16.8
100-Hour Fuel Moisture	Greater than 17.6%	Between 16.4% and 17.6%	Less than 16.4%
1000-Hour Fuel Moisture	Greater than 18.3%	Between 17.5% and 18.3%	Less than 17.5%
KBDI	Less than 337	Between 337 and 460	Greater than 460

FDRA – Sandhills



12/1

12/1



Sandhills FDRA - General Fire Danger Forecast

For planning purposes only; forecast is subject to change

Four or more **RED** blocks in a day signals the potential for a **Critical Fire Day**

DAY	TUE 07-Jan	WED 08-Jan	THU 09-Jan	FRI 10-Jan	SAT 11-Jan	SUN 12-Jan	MON 13-Jan
Avg. Max. Temp. (°F)	43	43	40	45	44	45	
Avg. Min. Humidity (%)	37	36	27	30	64	48	
Avg. 20' Wind Speed (mph)	7	2	5	2	4	3	
Avg. Wind Direction*	NNW	NNW	NNW	WNW	SSW	WSW	
Avg. Probability of Precip. (%)	0	0	1	57	40	9	
Days Since a Wetting Rain**	1.0	2.0	3.0				
Forecast ERC (Fuel Model Z)	24.3	33.1	37.2	40.2	31.5	31.5	32.5
Forecast BI (Fuel Model Z)	27.4	24.8	40.5	24.5	26.8	24.6	25.2
Forecast IC (Fuel Model Z)	1.7	2.4	4.1	2.6	1.1	1.0	1.2
Forecast 100-Hr. FMC	19.4	19.2	18.8	18.3	17.6	17.3	17.0
Forecast 1000-Hr. FMC	23.0	23.1	23.1	23.1	23.1	23.0	23.0
KBDI	185.0						

Data Source:

- Weather forecasts come from the National Weather Service's Digital Forecast Database. The wind speed and direction, and probability of precipitation, are calculated as averages of the 1 am, 7 am, 1 pm, and 7 pm forecasts. The 20-foot wind speed is estimated from the 10meter forecast using the log wind profile method.
- Days since a wetting rain is calculated using a combination of historical data (to determine the most recent wetting rain event) and
 forecasted precipitation amounts. These forecasted amounts are only available for the first three days of the forecast period.
- · Fire danger forecasts for the next 7 days are issued by National Weather Service through WIMS. KBDI is only available on the first forecast day since the NFDRS Forecast product does not include precipitation amounts, which are used to adjust KBDI from day to day

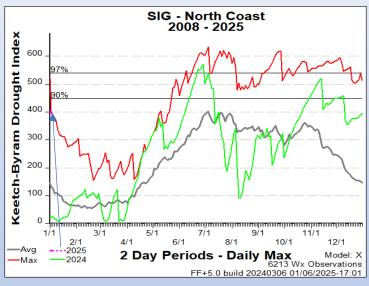
Values in the table above are averages from 3 stations in this FDRA:

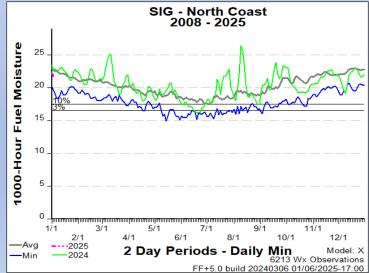
- Sandhills Research Station (317040)
- Rockingham (318202)
 Fort Liberty (318503)

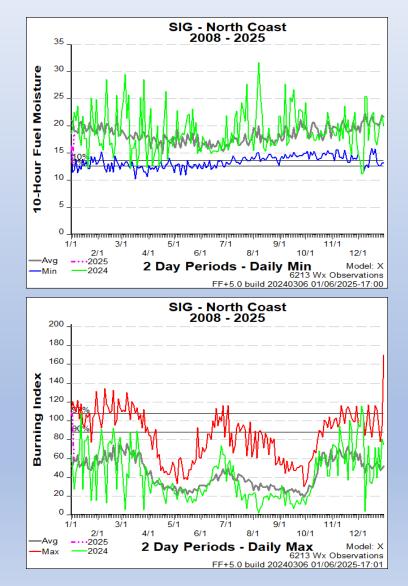
KEY	Low to Moderate Burning Conditions	Burning Conditions Can be High CAUTION	Burning Conditions Can be Critical WATCH OUT!
Avg. Max. Temp.	Less than 50°F	Between 50°F and 60°F	Greater than 60°F
Avg. Min. Humidity	Greater than 40%	Between 30% and 40%	Less than 30%
Avg. 20' Wind Speed	Less than 4 mph	Between 4 mph and 8 mph	Greater than 8 mph
Avg. Wind Direction*	Criticality of wind	direction is highly dependent on burn ope	rations and/or structures threatened.
Days Since a Wetting Rain**	A wetting rain is d	efined as 0.10" or greater. This is an average	ge of the FDRA stations noted above.
Energy Release Comp.	Less than 52.4	Between 52.4 and 62	Greater than 62
Burning Index	Less than 45.6	Between 45.6 and 53.3	Greater than 53.3
Ignition Component	Less than 13.6	Between 13.6 and 18.8	Greater than 18.8
100-Hour Fuel Moisture	Greater than 17.4%	Between 16% and 17.4%	Less than 16%
1000-Hour Fuel Moisture	Greater than 18.2%	Between 17.2% and 18.2%	Less than 17.2%
KBDI	Less than 397	Between 397 and 500	Greater than 500
Other factors to consider when a	letermining fire danger: s	ky conditions, precipitation amount,	number of days since rain, and seasor

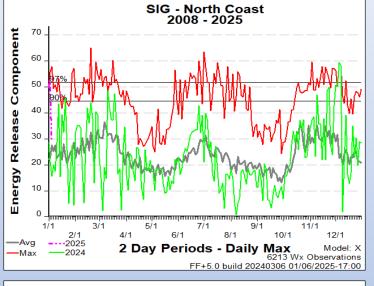


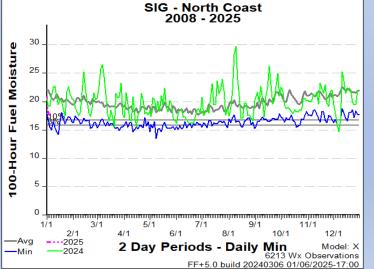




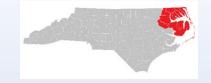


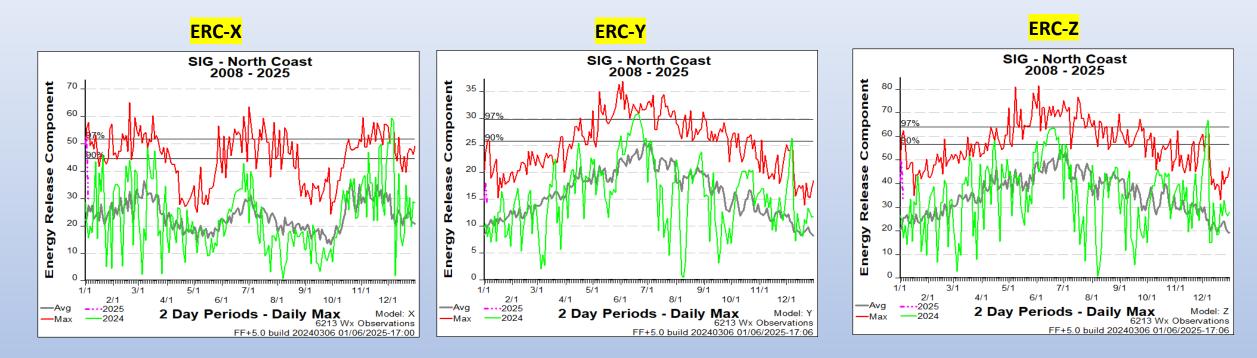






FDRA – North Coast





Comparison of ERC by NFDRS Fuel Model X: 1's, 10's, Live Component (GSI driven); + Drought Loading Y: Heavily weighted on 1000's, less on smaller dead; No live; + Drought Loading Z: Near even distribution between the four dead size classes of 1's, 10's, 100's, 1000's; No live; + Drought Loading

Average, Max, CY Year 2024 are displayed along with Year-to-Date 2025

Northern Coastal FDRA - General Fire Danger Forecast

For planning purposes only; forecast is subject to change

DAY	TUE 07-Jan	WED 08-Jan	THU 09-Jan	FRI 10-Jan	SAT 11-Jan	SUN 12-Jan	MON 13-Jan
Avg. Max. Temp. (°F)	38	41	37	41	44	43	
Avg. Min. Humidity (%)	47	40	38	37	64	51	
Avg. 20' Wind Speed (mph)	11	5	9	6	6	6	
Avg. Wind Direction*	NW	NW	NW	NW	SW	NW	
Avg. Probability of Precip. (%)	1	0	0	35	45	5	
Days Since a Wetting Rain**	1.0	2.0	3.0				
Forecast ERC (Fuel Model X)	14.0	26.4	33.6	38.6	23.0	18.3	22.1
Forecast BI (Fuel Model X)	53.6	56.3	103.4	72.5	53.6	38.9	46.1
Forecast IC (Fuel Model X)	1.6	1.9	4.0	3.3	1.3	0.8	1.2
Forecast 100-Hr. FMC	18.8	19.0	19.1	18.8	18.2	17.8	17.4
Forecast 1000-Hr. FMC	23.1	23.1	23.0	23.0	22.9	22.9	22.8
KBDI	362.5						

Four or more **RED** blocks in a day signals the potential for a **Critical Fire Day**

Data Source:

- Weather forecasts come from the National Weather Service's <u>Digital Forecast Database</u>. The wind speed and direction, and probability of precipitation, are calculated as averages of the 1 am, 7 am, 1 pm, and 7 pm forecasts. The 20-foot wind speed is estimated from the 10-meter forecast using the log wind profile method.
- Days since a wetting rain is calculated using a combination of historical data (to determine the most recent
 wetting rain event) and forecasted precipitation amounts. These forecasted amounts are only available for the
 first three days of the forecast period.
- Fire danger forecasts for the next 7 days are issued by National Weather Service through WIMS. KBDI is only
 available on the first forecast day since the <u>NFDRS Forecast</u> product does not include precipitation amounts,
 which are used to adjust KBDI from day to day

Burning Conditions Can be

High

CAUTION

Between 45°F and 55°F

Burning Conditions Can be

Critical

WATCH OUT!

Greater than 55°F

Values in the table above are averages from 4 stations in this FDRA:

Low to Moderate

Burning Conditions

Less than 45°F

- Elizabeth City (311503)
- Greens Cross (313001)
- Pocosin Lakes (315201)
- Fairfield (317901)

KEY

Avg. Max. Temp.

)-74 th ; 75-89 th ; 90 th + (Indices)	
26-100 th ; 11-25 th ; 0-10 th (Fuel Moisture)	

Avg. Min. Humidity	Greater than 40%	Between 35% and 40%	Less than 35%
Avg. 20' Wind Speed	Less than 10 mph	Between 10 mph and 15 mph	Greater than 15 mph
Avg. Wind Direction*	Criticality of wind dire	ction is highly dependent on burn opera	tions and/or structures threatened.
Days Since a Wetting Rain**	A wetting rain is define	ed as 0.10" or greater. This is an average	of the FDRA stations noted above.
Energy Release Comp.	Less than 39.3	Between 39.3 and 48	Greater than 48
Burning Index	Less than 78	Between 78 and 96.8	Greater than 96.8
Ignition Component	Less than 9.3	Between 9.3 and 12.8	Greater than 12.8
100-Hour Fuel Moisture	Greater than 17.7%	Between 16.8% and 17.7%	Less than 16.8%
1000-Hour Fuel Moisture	Greater than 18.5%	Between 17.5% and 18.5%	Less than 17.5%
KBDI	Less than 365	Between 365 and 463	Greater than 463
Other factors to consider whe	n determining fire dang	er: sky conditions, precipitation amo	unt, number of days since rain,

FDRA – South Coast

70

60

50

40

30

20

10

0 1/1

30

25

20

15

10

5

0

—Avg

-Min

1/1

- -

100-Hour Fuel Moisture

—Avg

-Max

Component

Energy Release

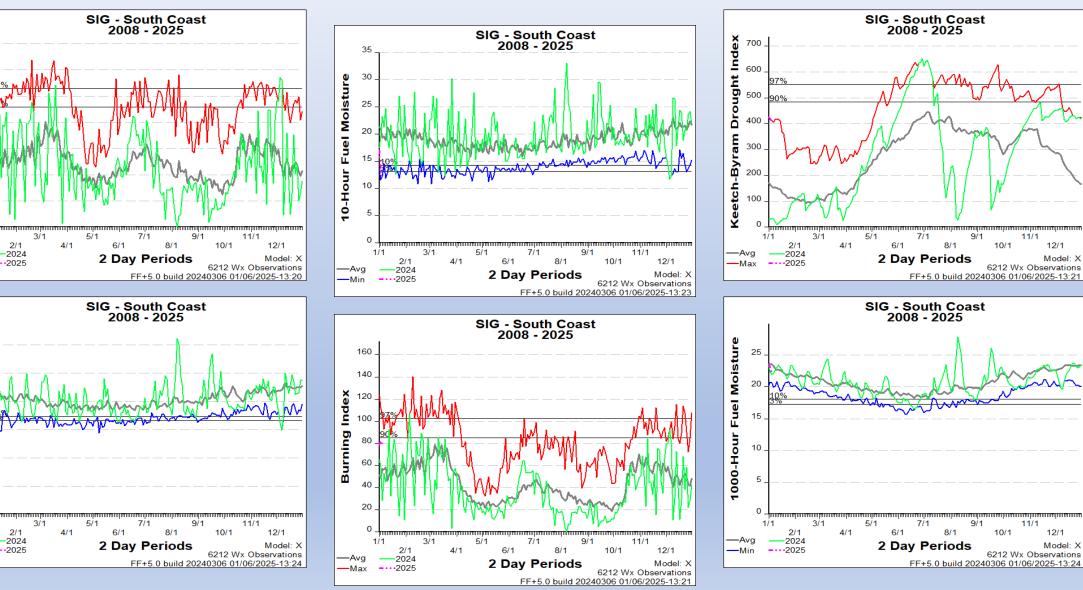


12/1

12/1

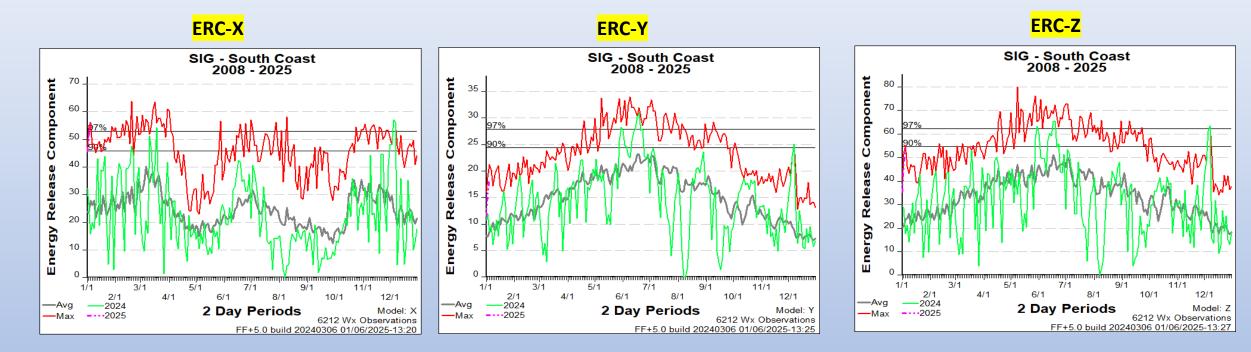
Model: X

Model: X



FDRA – South Coast





Comparison of ERC by NFDRS Fuel Model

X: 1's, 10's, Live Component (GSI driven); + Drought Loading

Y: Heavily weighted on 1000's, less on smaller dead; No live; + Drought Loading

Z: Near even distribution between the four dead size classes of 1's, 10's, 100's, 1000's; No live; + Drought Loading

Average, Max, CY Year 2024 are displayed along with Year-to-Date 2025

Weekly Outlook

Southern Coastal FDRA - General Fire Danger Forecast

For planning purposes only; forecast is subject to change

Four or more **RED** blocks in a day signals the potential for a **Critical Fire Day**

DAY	TUE 07-Jan	WED 08-Jan	THU 09-Jan	FRI 10-Jan	SAT 11-Jan	SUN 12-Jan	MON 13-Jan
Avg. Max. Temp. (°F)	43	44	39	44	46	46	
Avg. Min. Humidity (%)	41	36	33	34	65	48	
Avg. 20' Wind Speed (mph)	8	3	6	3	5	4	
Avg. Wind Direction*	NNW	NW	NW	WNW	SW	WNW	
Avg. Probability of Precip. (%)	0	0	0	47	48	7	
Days Since a Wetting Rain**	3.3	4.3	5.3				
Forecast ERC (Fuel Model X)	27.9	34.2	40.9	43.9	23.9	24.1	26.2
Forecast BI (Fuel Model X)	78.7	64.3	109.9	66.6	53.3	50.5	51.4
Forecast IC (Fuel Model X)	3.4	2.7	5.5	3.5	1.5	1.3	1.5
Forecast 100-Hr. FMC	18.9	18.7	18.3	17.8	17.5	17.0	16.7
Forecast 1000-Hr. FMC	24.1	24.1	24.0	24.0	23.9	23.7	23.6
KBDI	428.6						

Data Source:

- Weather forecasts come from the National Weather Service's <u>Digital Forecast Database</u>. The wind speed and direction, and probability of precipitation, are calculated as averages of the 1 am, 7 am, 1 pm, and 7 pm forecasts. The 20-foot wind speed is estimated from the 10-meter forecast using the log wind profile method.
 Days since a wetting rain is calculated using a combination of historical data (to determine the most recent
- Days since a wetting rain is calculated using a combination of historical data (to determine the most recent
 wetting rain event) and forecasted precipitation amounts. These forecasted amounts are only available for the
 first three days of the forecast period.
- Fire danger forecasts for the next 7 days are issued by National Weather Service through WIMS. KBDI is only available on the first forecast day since the <u>NFDRS Forecast</u> product does not include precipitation amounts, which are used to adjust KBDI from day to day

Values in the table above are averages from 7 stations in this FDRA:

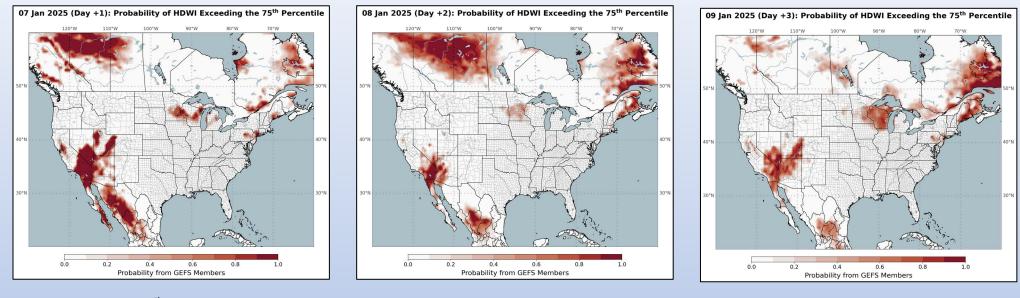
- Finch's Station (317501)
- Beaufort (317801)
- New Bern (319004)
- Turnbull Creek (319302)
- Hofmann Forest (319507)
- Whiteville (319701)
- Sunny Point (319803)

KEY	Low to Moderate Burning Conditions	Burning Conditions Can be High CAUTION	Burning Conditions Can be Critical WATCH OUT!			
Avg. Max. Temp.	Less than 50°F	Between 50°F and 65°F	Greater than 65°F			
Avg. Min. Humidity	Greater than 40%	Between 35% and 40%	Less than 35%			
Avg. 20' Wind Speed	Less than 5 mph	Between 5 mph and 10 mph	Greater than 10 mph			
Avg. Wind Direction*	Criticality of wind direction is highly dependent on burn operations and/or structures threatened.					
Days Since a Wetting Rain**	A wetting rain is defined as 0.10" or greater. This is an average of the FDRA stations noted above.					
Energy Release Comp.	Less than 36.4	Between 36.4 and 47.2	Greater than 47.2			
Burning Index	Less than 68.3	Between 68.3 and 89.5	Greater than 89.5			
Ignition Component	Less than 7.9	Between 7.9 and 12	Greater than 12			
100-Hour Fuel Moisture	Greater than 18.2%	Between 17.3% and 18.2%	Less than 17.3%			
1000-Hour Fuel Moisture	Greater than 19%	Between 18% and 19%	Less than 18%			
KBDI	Less than 385	Between 385 and 486	Greater than 486			
Other factors to consider when determining fire danger: sky conditions, precipitation amount, number of days since rain, and season						

Statewide Slides

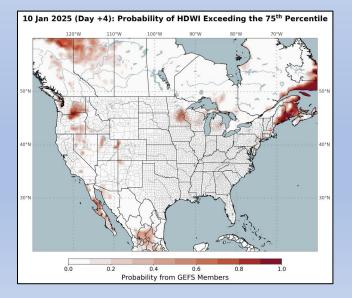
Hot-Dry-Windy Index (HDW)

Tuesday > 75th Percentile

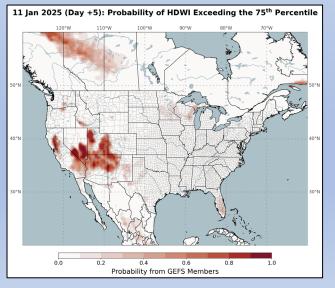


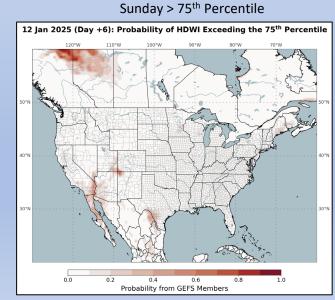
Wednesday > 75th Percentile

Friday > 75th Percentile



Saturday > 75th Percentile



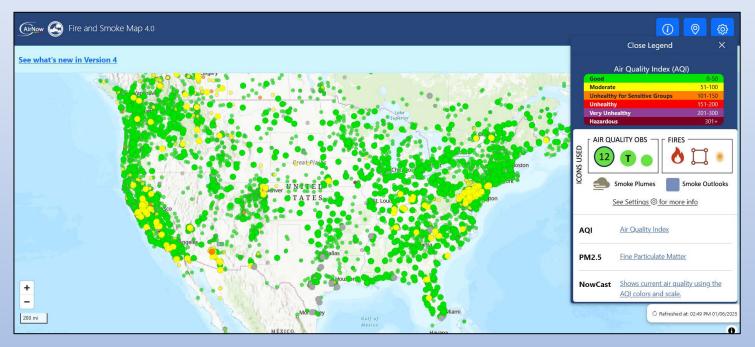


Thursday > 75th Percentile

- Another visualization tool to pick up on broader weather, but with *limitations
- Only uses Max VPD (atmospheric moisture & temp) & Max Wind Speed to generate outputs
- Coarse Resolution 0.5
 Degree Grid
- <u>No</u> Account of Local Fuel Conditions & Topo Influences

https://www.hdwindex.org/probs.html

Air Quality Notes



https://fire.airnow.gov/#

Air Quality Portal 3

Home About Education Air Quality Blog Data & Tools ~ More Resources ~

Forecast Discussion

This forecast was issued on Monday, January 6, 2025 at 12:53 pm. 📀 This forecast is currently valid.

Today's Air Quality Conditions

Current daily average fine particulate levels are predominantly in the Code Green range, with the exception being in the western Piedmont where averages are holding in the low Code Yellow range.

Pror a display of the most recent Air Quality Index (AQI) conditions throughout the day, visit the Ambient Information Reporter (AIR) tool.

General Forecast Discussion

omorrow, a Miller B surface low pressure system will consolidate into a single coastal low and pull away from the coast. This will drag an Arctic front through the region and usher n the coldest and driest air of the season. Air quality levels show lower well inside the Code Green range across the state.

Outlook

Nednesday into Thursday, strong high pressure will drive into the Central Plains and extend eastward into the region. This will continue to provide strong cold air advection and keep temperatures well below-normal through the week. With a continuous supply of dry, Arctic air expect daily average fine particulate concentrations to remain in the Code Gree range, although overnight hourly values could temporarily rise into the low Code Yellow range due to strong temperature inversions and the need for increased residential wood ourning due to the frigid overnight lows that will drop well into the twenties or even upper teens.

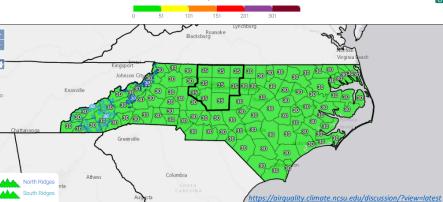
Author: Bradley McLamb (bradley.mclamb@deq.nc.gov) - NC Division of Air Quality

Extended Air Quality Outlook

The forecast Air Quality Index value for each pollutant represents the highest value expected within each county, so some areas and monitors may see lower values. We use the best nformation and techniques available to ensure the quality and accuracy of the forecasts we provide to the public. Note that ranges do not include the nine-county Triad region, which is covere by the Forsyth County Office of Environmental Assistance and Protection.

Forecast Day	View Maps	Max AQI Range	Category Range	Download KML
Monday (Jan 6)	Max AQI • PM2.5	28 to 45	Green	🛃 download
Tuesday (Jan 7)	Max AQI • PM2.5	30	Green	🛓 download
Wednesday (Jan 8)	Max AQI • PM2.5	35 to 37	Green	🛓 download
Thursday (Jan 9)	Max AQI • PM2.5	40 to 42	Green	🛓 download



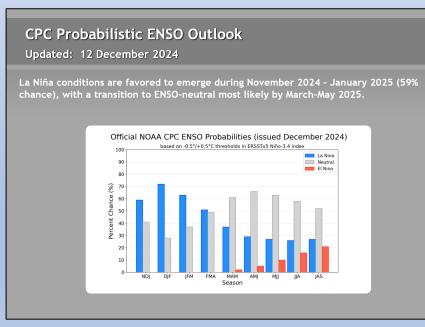


ENSO Notes from the CPC (12/12/24 Update)

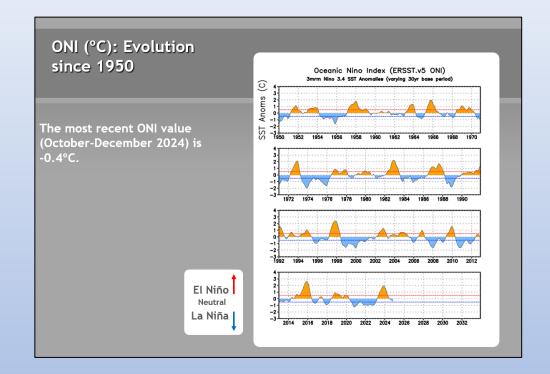
ENSO Alert System Status: La Niña Watch

La Niña conditions are most likely to emerge in November 2024 - January 2025 (59% chance), with a transition to ENSO-neutral most likely by March-May 2025 (61% chance).

ENSO, or El Nino Southern Oscillation, is a fluctuation in the sea surface temperature (SST) in the equatorial Pacific Ocean. Research has shown that even slight changes in the SST, particularly in area 3.4, can influence weather in North America. Generally, when SSTs are lower than normal, known as La Nina, NC has drier than normal conditions and can have more fire occurrence. However, La Nina also can lead to more tropical activity. El Nino, on the other hand, usually means wetter weather for NC, but less opportunity for tropical landfalls due to increased wind shear. In order to declare a La Nina, the departure from average SST must be at least -0.5° C (line shown in green) for 3 consecutive months. For El Nino, the departure must be at least 0.5° C above average for 3 consecutive months.



See this link for further discussion: <u>https://www.climate.gov/news-features/understanding-climate/us-climate-outlook-january-2025</u>



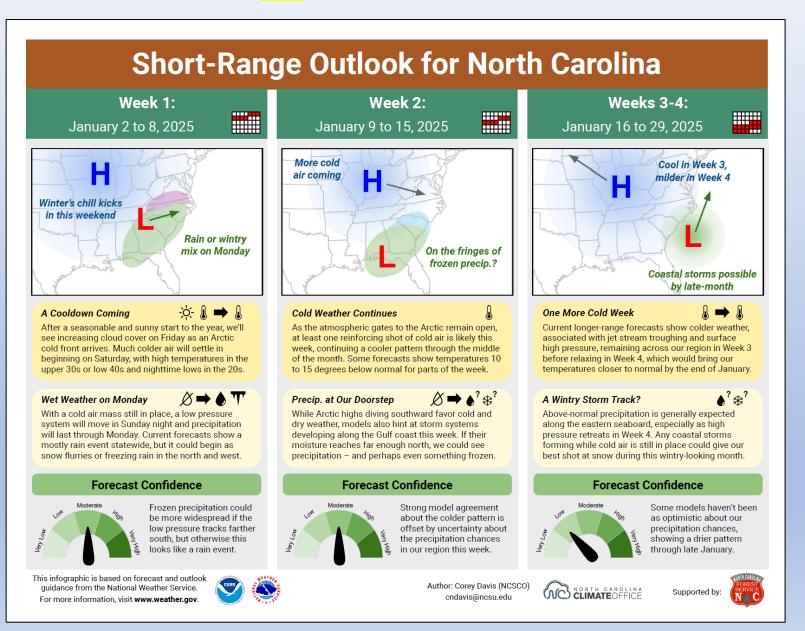
From the most recent CPC Diagnostic Discussion (ENSO Diagnostics Discussion):

[The dynamical models in the IRI plume <u>continue to predict a weak and a short duration La Niña</u>, as indicated by the Niño-3.4 index values less than -0.5°C [Fig. 6]. This prediction is also reflected in the latest North American Multi-Model Ensemble (NMME), which continues to predict slightly cooler SSTs and weak La Nina conditions. The forecast team leaned toward predicting an eventual onset of weak and short-lived La Nina conditions, based on the model guidance and current atmospheric anomalies. Weak La Niña conditions would be less likely to result in conventional winter impacts, though predictable signals could still influence the forecast guidance (e.g., CPC's seasonal outlooks). In summary, La Niña conditions are most likely to emerge in November 2024 - January 2025 (59% chance), with a transition to ENSO-neutral most likely by March-May 2025 (61% chance; [Fig. 7]).]

Slide Source: https://www.cpc.ncep.noaa.gov/products/analysis_monitoring/lanina/enso_evolution-status-fcsts-web.ppt

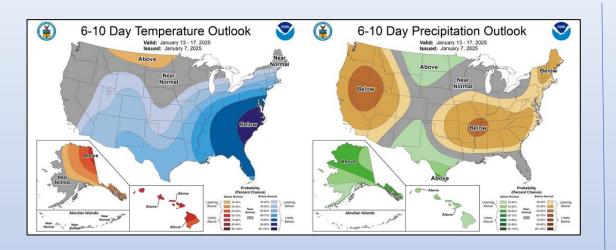
State Climate Office: Short-Range Monthly Outlook for NC

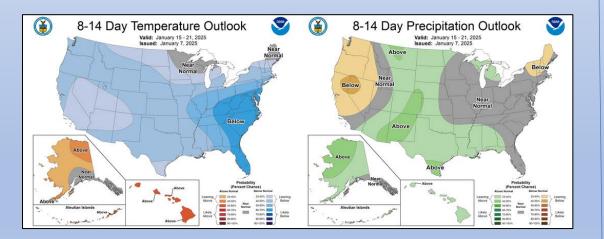
Released 1/2/25 & Location: <u>https://climate.ncsu.edu/fire/outlooks/</u>



CPC Temp & Precip Outlook

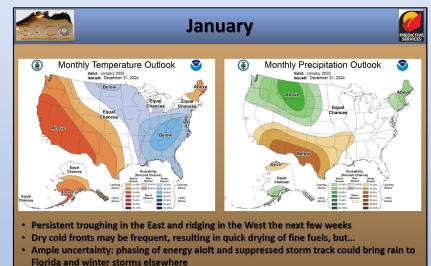
6-10 Day, 8-14 Day, Weeks 3-4, Monthly, 3-Month Seasonal



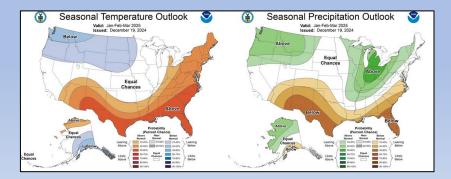


 Weeks 3-4 Temperature Outlook
 Image: Annury 18-31, 2025

 Use: Janury 18-31, 2025
 Use: Janury 18-31, 2025

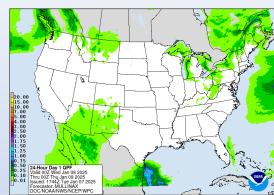


- Dry 2-3 weeks possible for the Mississippi Valley and Appalachians if winter storms do not materialize
- Pattern change should begin by late January

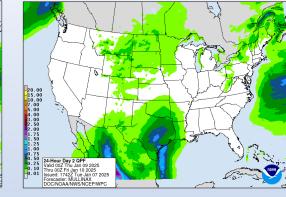


Quantitative Precipitation Forecast, 7-Day

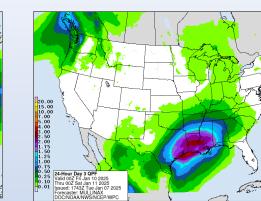
Location: <u>https://www.wpc.ncep.noaa.gov/#</u>



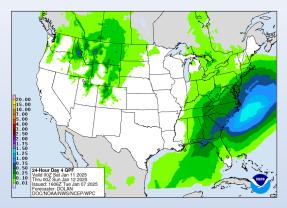
Day - 1



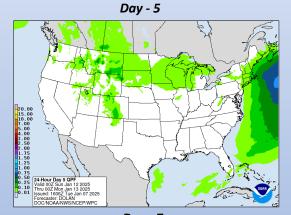
Day - 2

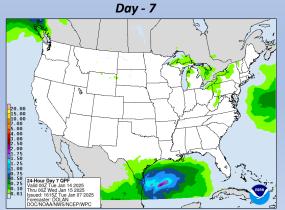


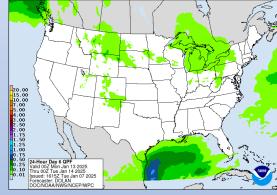
Day - 3



Day - 4

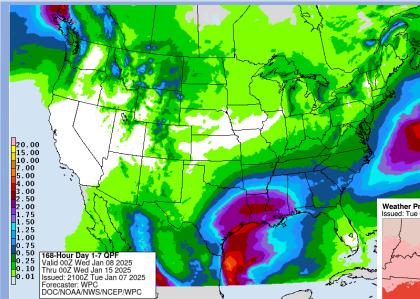


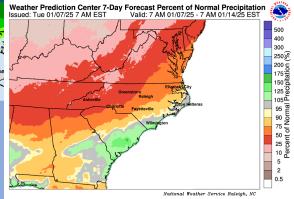




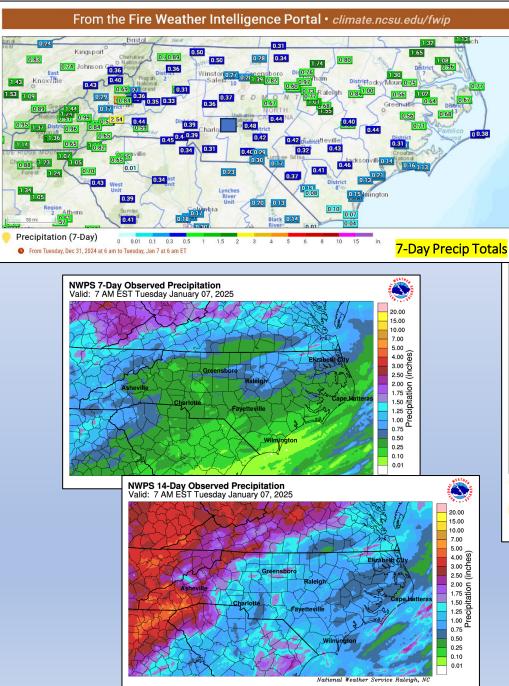
Day - 6

*Important to note these values are subject to <u>significant change</u> as weather system modeled tracks adjust farther out in time.



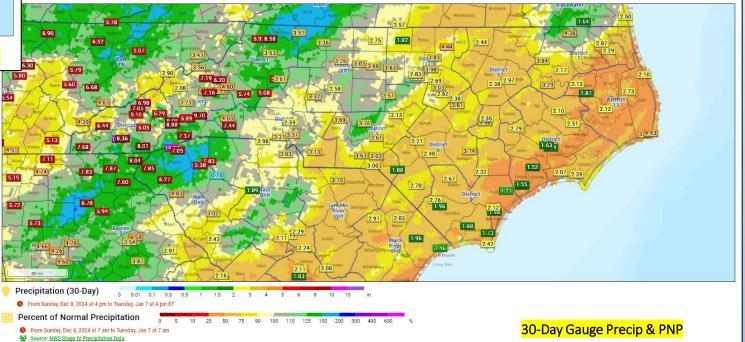


https://www.weather.gov/rah/qpf

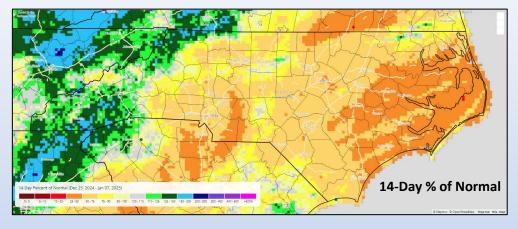


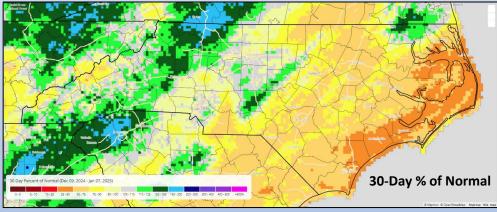
Observed Precipitation

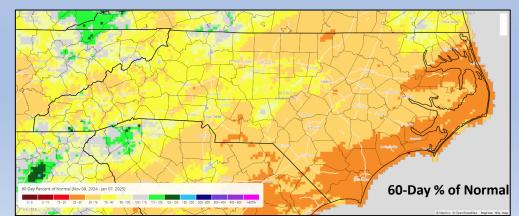
From the Fire Weather Intelligence Portal • climate.ncsu.edu/fwip

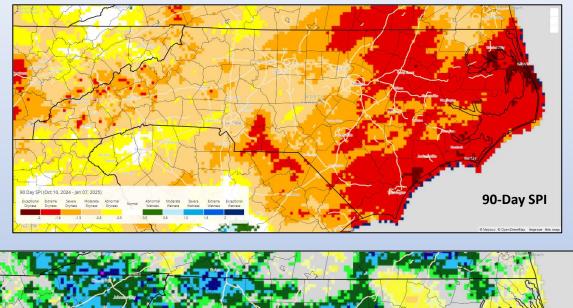


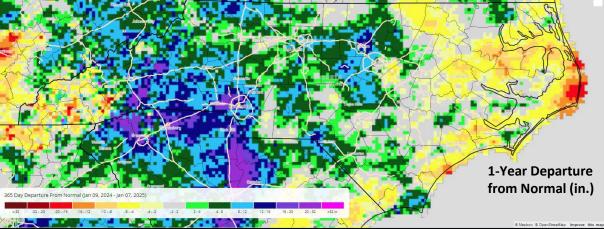
Comparing Observed Precip to 30-Yr Normals, SRCC (Ending 1/7/25 am)





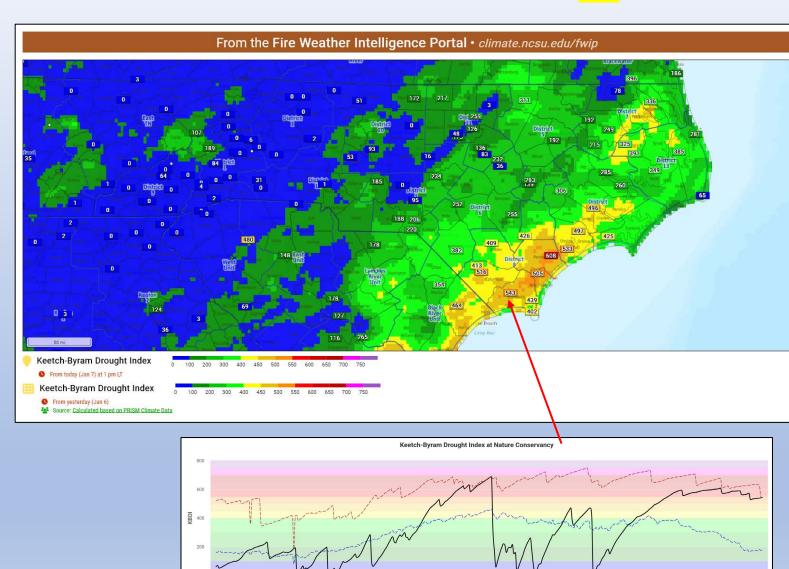






https://srcc.tamu.edu/water_portal/

KBDI - Station Points FWIP (Point calculation from WIMS @ 1300 on 1/7/25)



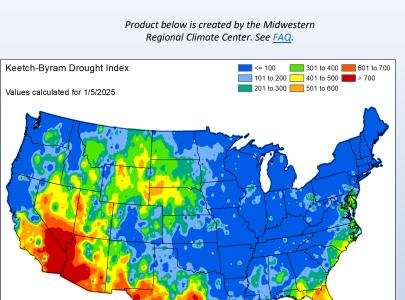
Jun 1

Jul 1

+ Keetch-Byram Drought Index -- Daily Maximum (2001-2025) -- Daily Average (2001-2025)

Aug 1

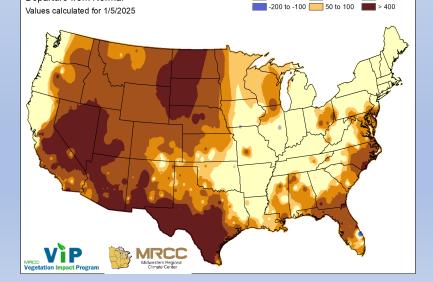
San '



< -400

-100 to -50 ____ 100 to 200

-400 to -200 _____ -50 to 50 _____ 200 to 400



MRC

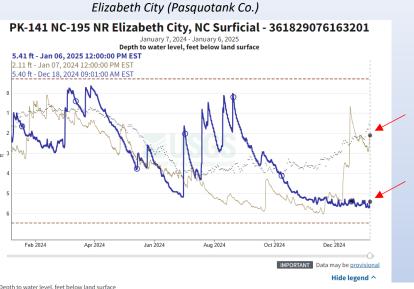
Keetch-Byram Drought Index,

Departure from Normal

General Statewide Streamflow & Surficial Groundwater Well Monitoring at Coast

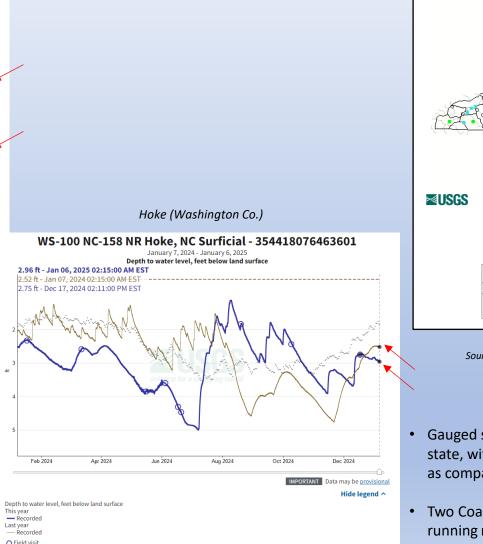
— Median 1987 - 2024

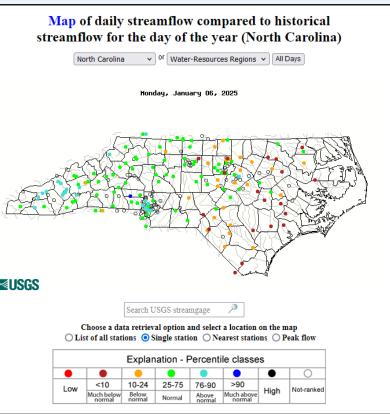
-- Highest recorded water level (0.05 ft below LS March 2,3 1994): 0.5 ft



Depth to water level, feet below land surface This year — Recorded Last year — Recorded O Field visit — Median 1992 - 2024

Highest recorded water level (0.70 ft above LS Jan 4, 1992): -0.7 ft
 Lowest recorded water level (6.47 ft below LS Oct 30, 2008): 6.47 ft



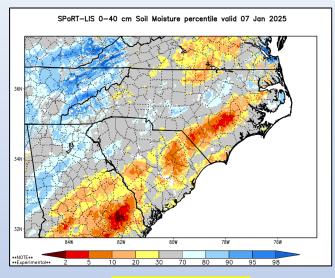


Source: https://waterwatch.usgs.gov/index.php?m=pa07d&r=nc&w=map

- Gauged streamflow continues a slow decline in eastern half of state, with more in the "below" & "much below" normal range as compared to last month for daily flow.
- Two Coastal Plain monitoring wells note that Elizabeth City is running near record minimum for the month.

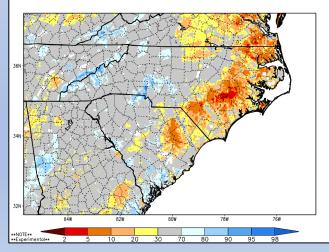
SPoRT Modeled Relative Soil Moisture & GVF

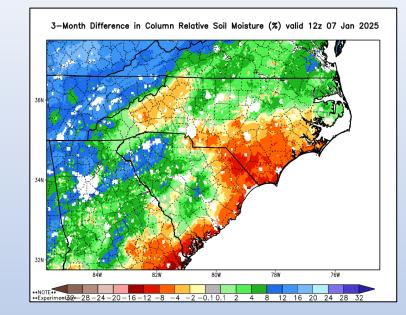
<mark>0-40 cm Depth</mark>



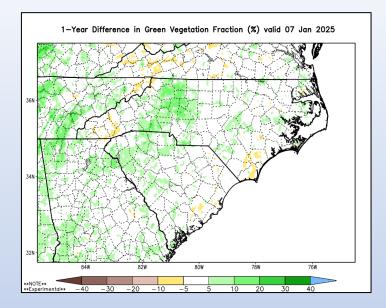
0-200 cm Depth

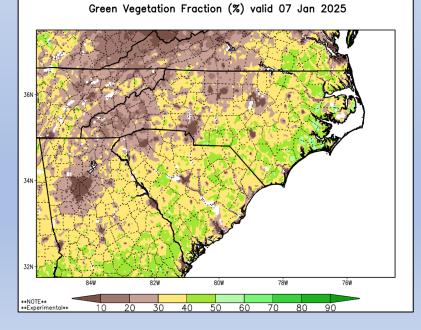
SPoRT-LIS 0-200 cm Soil Moisture percentile valid 07 Jan 2025





- See areas of **modeled** improvement & degradation near the surface and for the entire soil profile (left). These outputs don't include rainfall ending on 1/6/25 pm.
- The **"3-Month"** Soil Moisture Difference map shows Southern/Eastern drying along with Helene Rains falling off the time scale in the West (center).
- The Green Vegetation "1-Year Difference" map can provide useful context for various drought, insect/disease/damage, seasonality & agricultural crop influences on the landscape as compared to the "Current GVF" map (right).

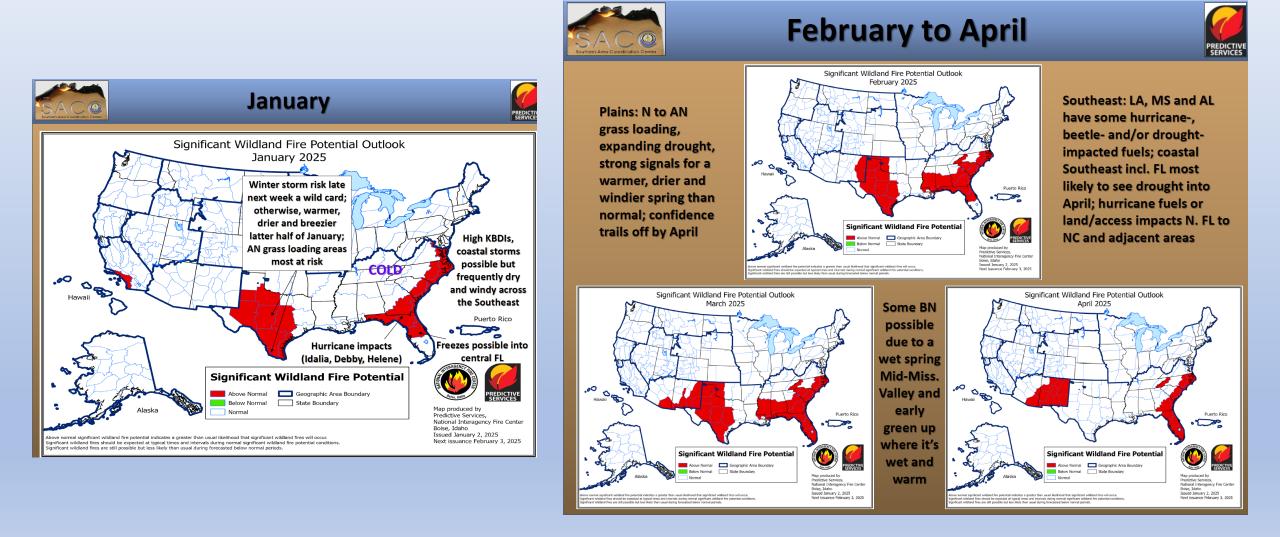




Significant Wildland Fire Potential Outlook:

Updated 1/2/25 – Next Update on 2/3/25

*A significant fire is one that requires resources from outside the district (other than aviation). IA potential is based more on shorter term weather factors. Just a few days of dry weather can increase IA activity considerably as we have consistently seen this year.

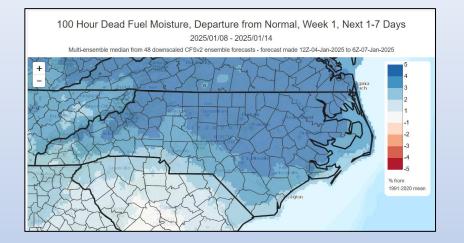


Modeled Departure from Normal by Week: 100-hr Fuels

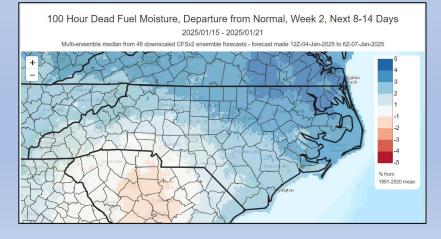
Output relies on experimental forecast outputs and is subject to change

Week-1





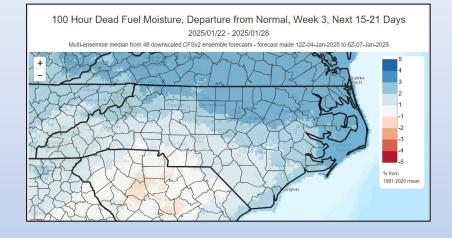
Week-2



This output can provide insight into general drying trends and potential impacts to overall fire danger, especially prior to full green-up or in drought conditions. Outputs relate to interactions of warmer/colder temps, moist/dry air masses, precip amt/duration and overnight RH recovery trends.

Note the <u>modeled</u> above normal conditions (higher % mc) for portions of the state in Weeks 1-3, followed by return of significantly drier conditions in Week-4.

Important to note that there is significant forecast uncertainty as you go further out in time, especially relating to any potential storm tracks.



Week-4

