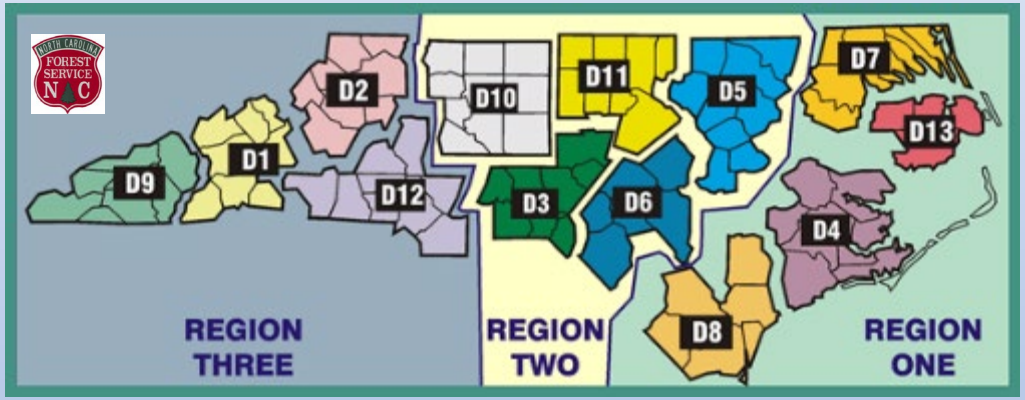
Statewide Seasonal Fire Danger Assessment



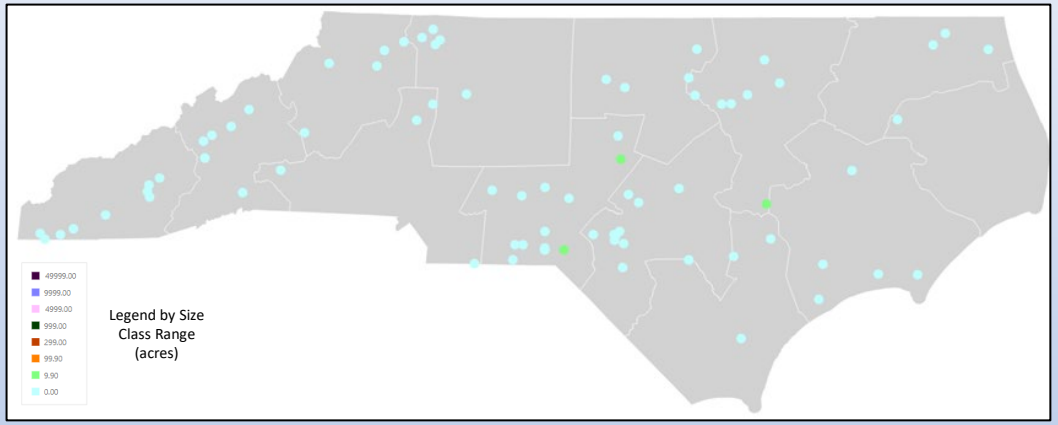
- November 5, 2024 Update -

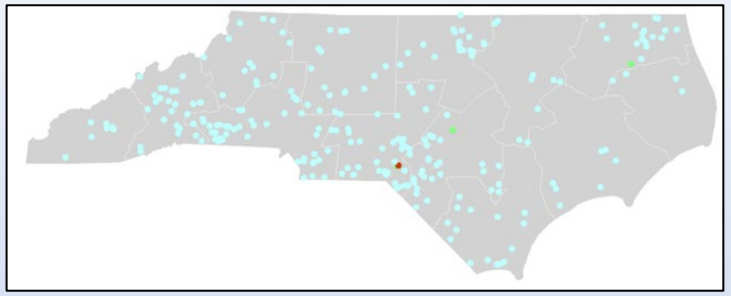
Created by: Jamie Dunbar
Fire Environment Staff Forester
NC Forest Service

Incident Activity

October 1 - 31

fiResponse Incident Location Map (for general context, preliminary data)
7-Day Activity: 10/29 – 11/4, 2024
Report: Business Intelligence Module, Response Trends Map





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 465 fires for 6,046 acres**
December: 10-yr avg is 277 fires for 427 acres

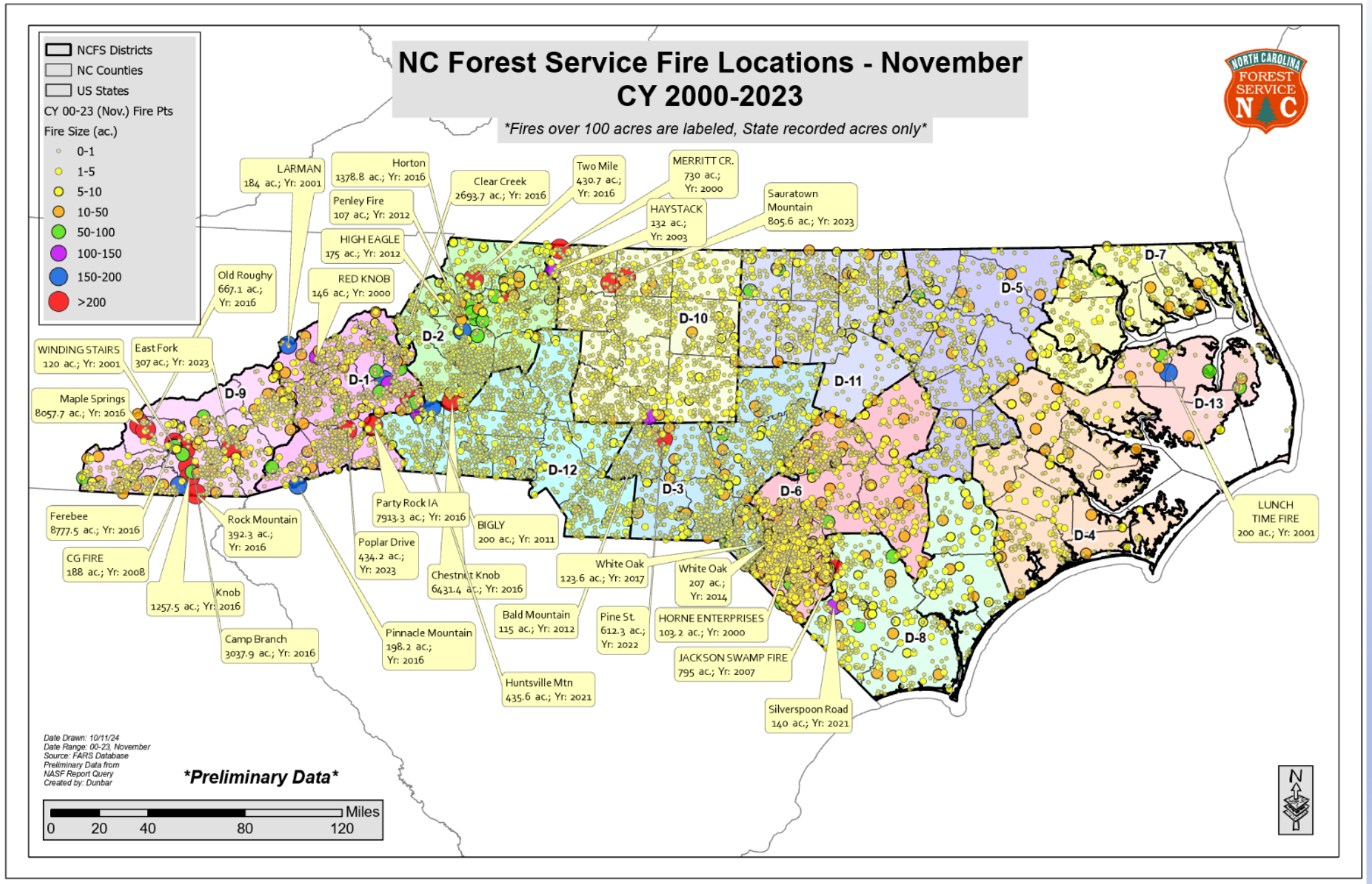
(10-yr Statewide averages, above, are based on FARS 2014-2023 Data)

NCFS – By Region				
MTD Fire Activity (Does Not Include Federal Ownerships)				
Data Source:	Signal 14 Regional Activity Summary Report (Signal 14 is a daily snapshot in time)			
Date Range:	11/1 – 11/4, 2024			
Area	Wildfire Count	Wildfire Acres	RX Count (State & Private)	RX Acres (State & Private)
R1	9	17.9	2	168
R2	28	56.9	1	16
R3	11	11.1	0	0

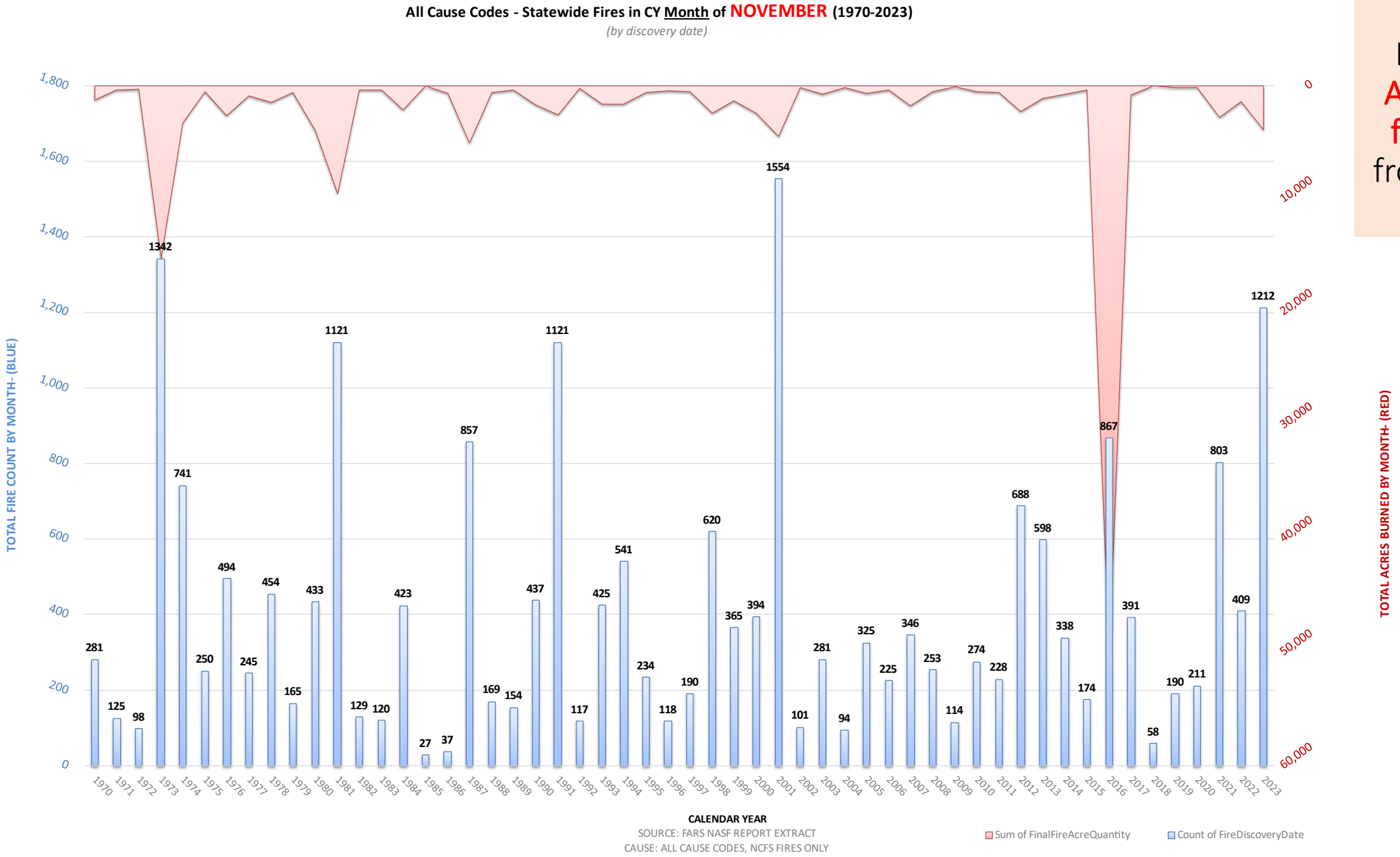
Largest incidents last **7-Days** (Ending 11/4):
from fiResponse & preliminary reporting only

Incident Name	Discovery Date	Region	District	County	Acres
Ammons Farm	11/4/2024	Region 2	District 3	Lee County	68.00
Matts First Fire	11/1/2024	Region 2	District 3	Richmond County	25.00
Miscanthus	10/31/2024	Region 2	District 5	Wayne County	10.00
Coast Haven Road	11/1/2024	Region 1	District 4	Carteret County	6.00
227 McRae Cir	11/1/2024	Region 2	District 3	Montgomery County	4.50
Horner Road Fire 2	11/1/2024	Region 1	District 7	Pasquotank County	4.00
Goat Fire	11/1/2024	Region 3	District 2	Wilkes County	3.00
Cherry Top	11/3/2024	Region 3	District 1	Buncombe County	3.00
301	10/29/2024	Region 2	District 5	Nash County	2.00
Pine Swamp Thicket	10/30/2024	Region 3	District 1	Yancey County	1.50

This narrative does not include tropical storm incident response operations.

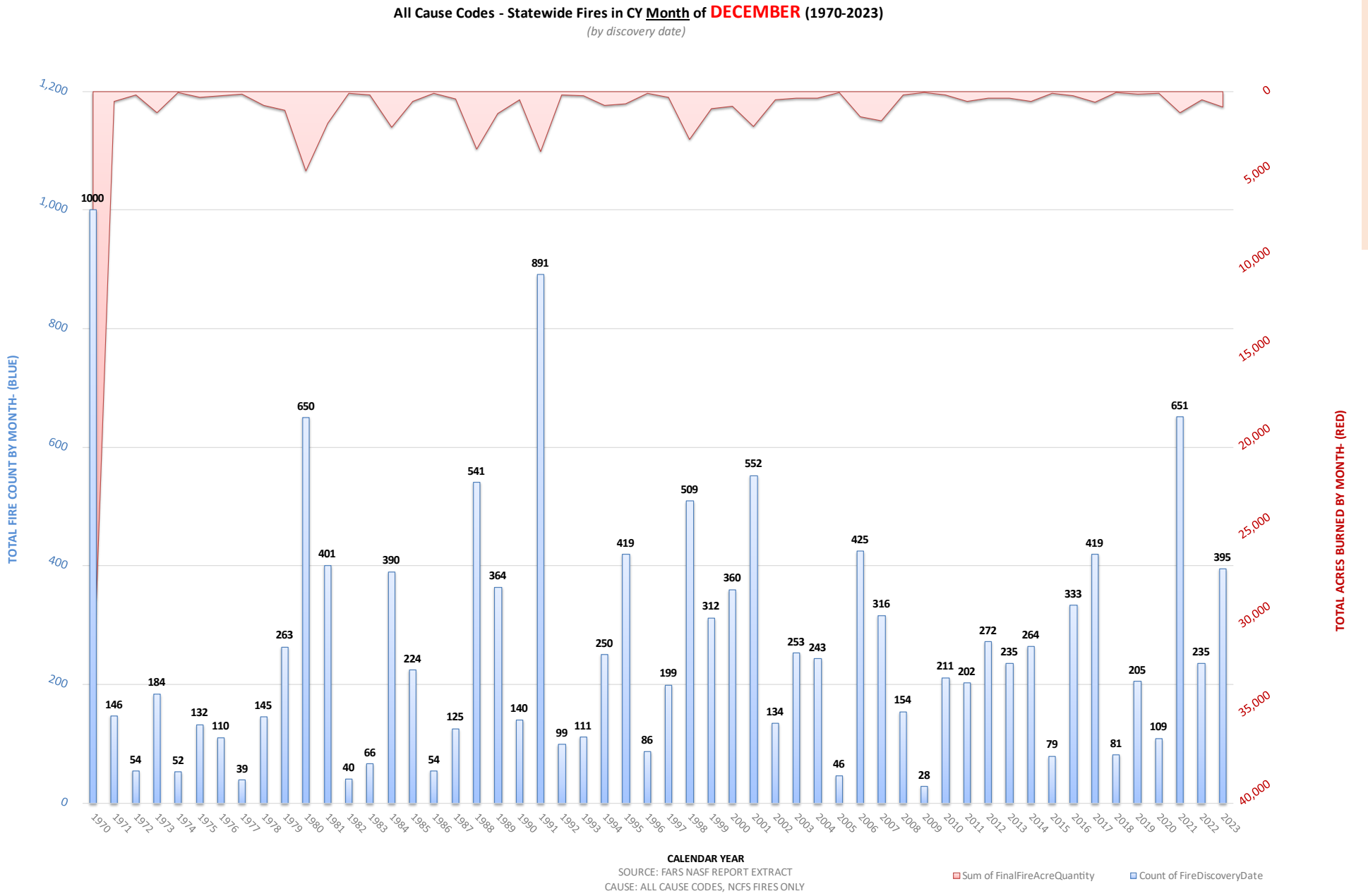


*Recent fires that have not been finalized in FARS aren't displayed on map.



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

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

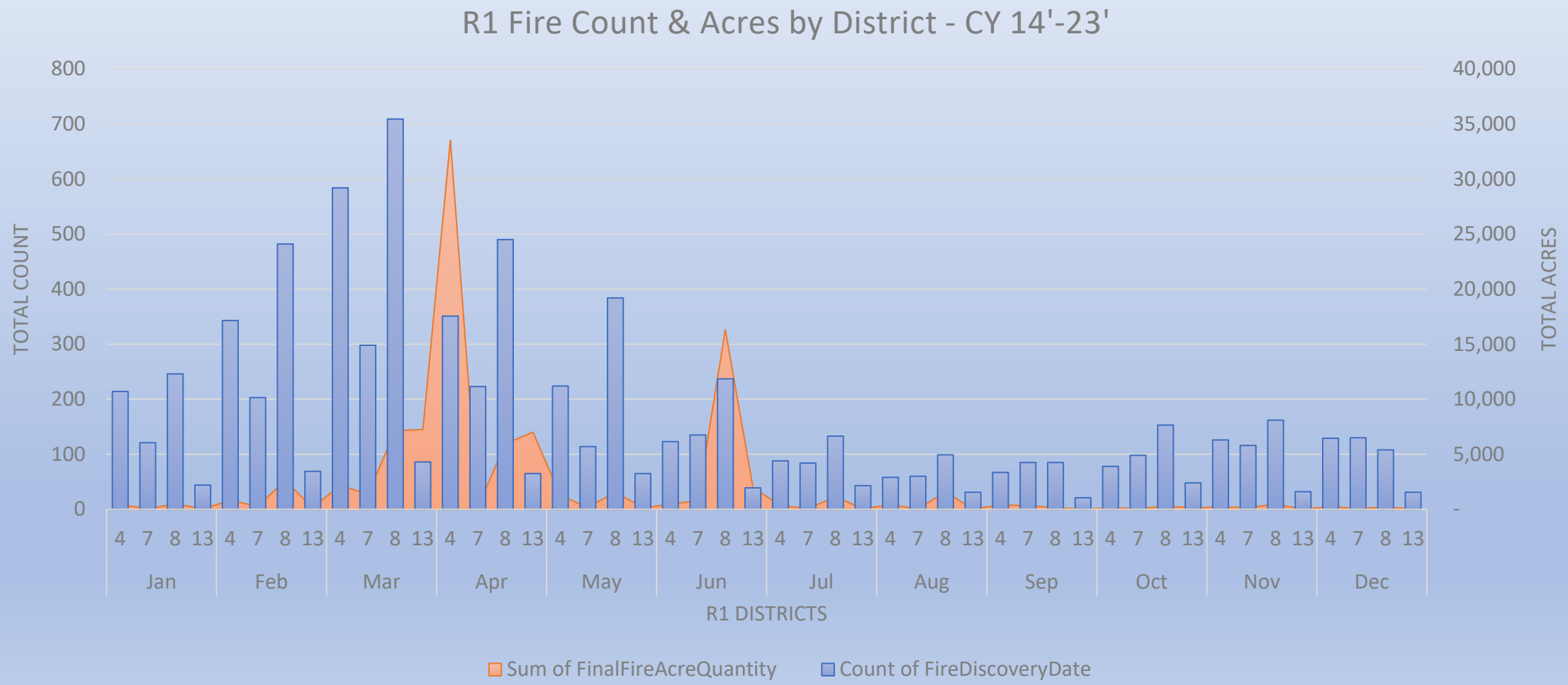


Distribution of
All Fires & Acres
for DECEMBER
from 1970 - 2023

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

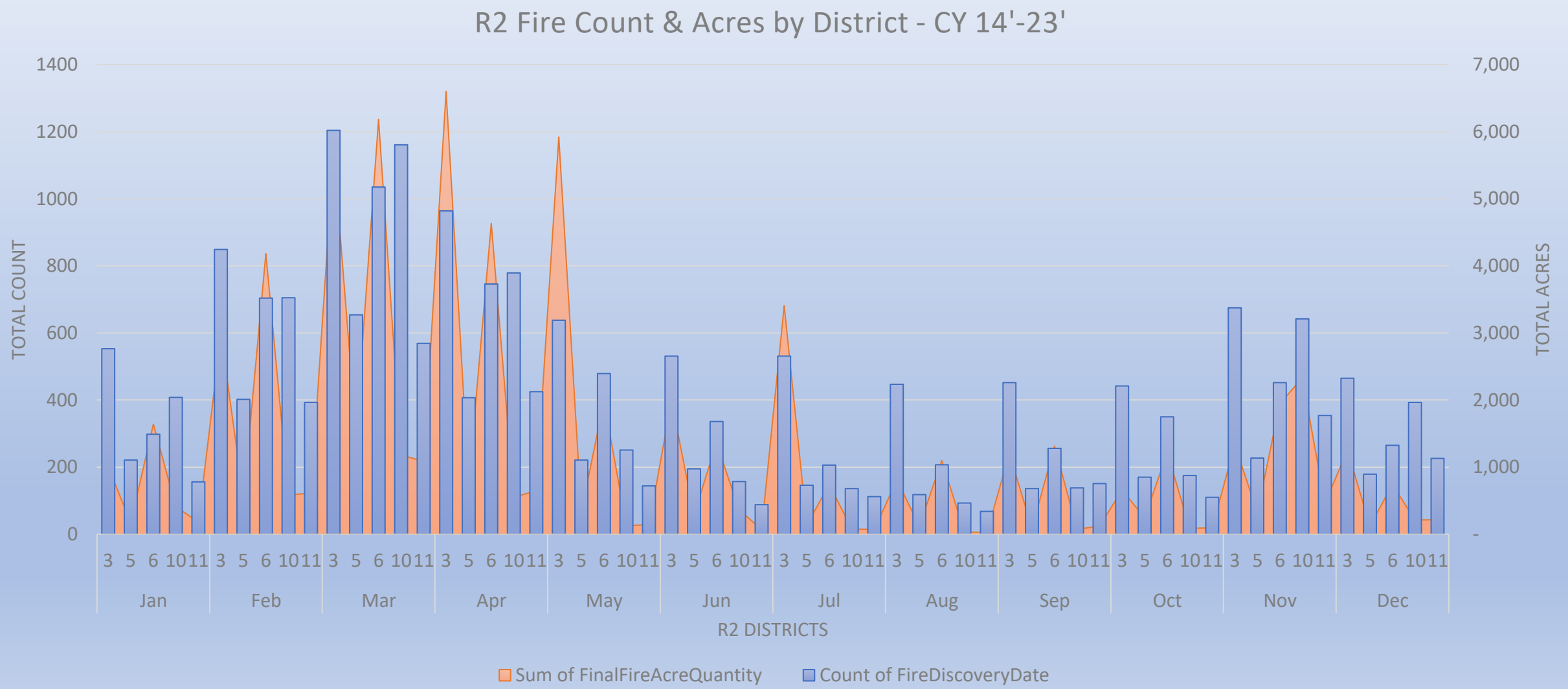
Seasonal Pattern – R1 – Rolling 10YR Count

Source: FARS NASF REPORT EXTRACT
Cause: ALL CAUSE CODES, NCFS REPORTED FIRES/ACRES ONLY
By: DISCOVERY DATE



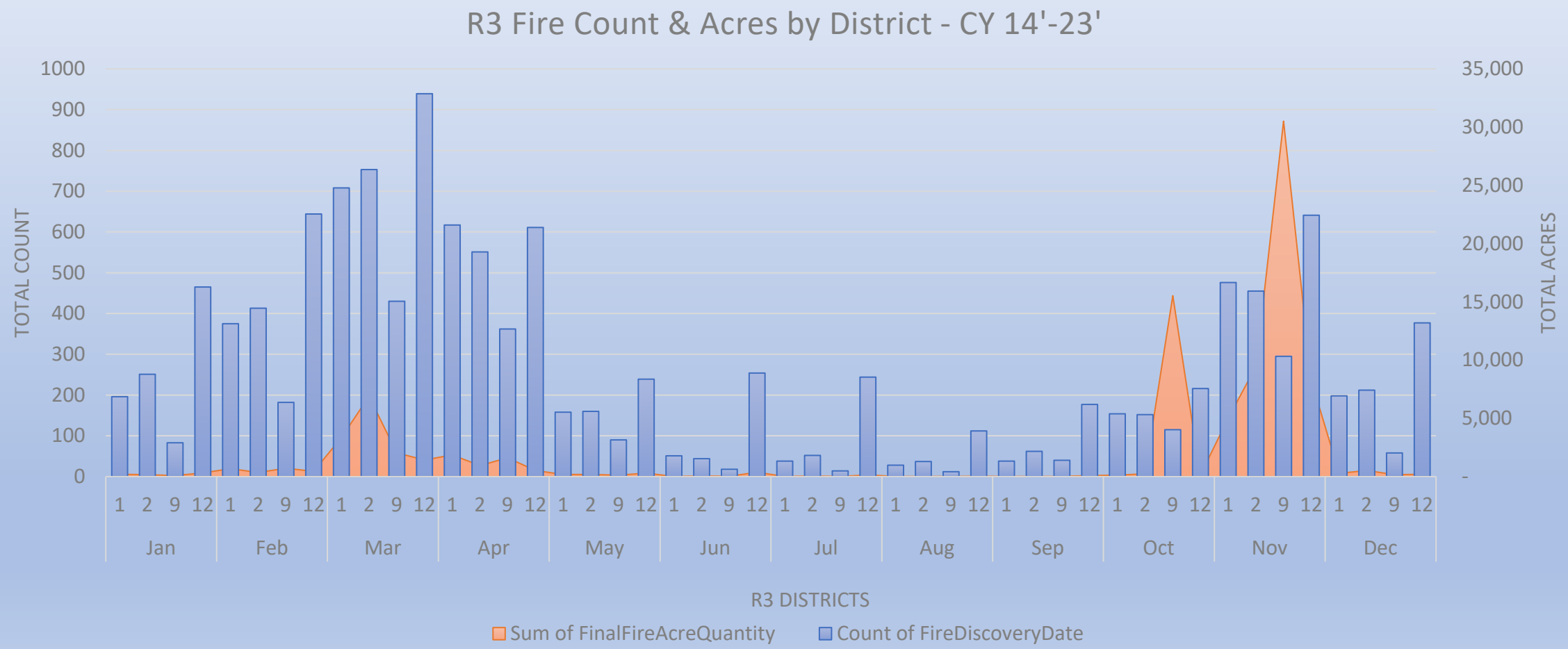
Seasonal Pattern – R2 – Rolling 10YR Count

Source: FARS NASF REPORT EXTRACT
Cause: ALL CAUSE CODES, NCFS REPORTED FIRES/ACRES ONLY
By: DISCOVERY DATE



Seasonal Pattern – R3 – Rolling 10YR Count

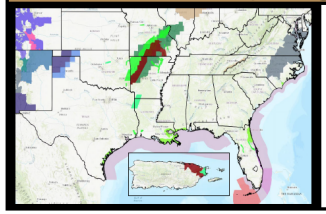
Source: FARS NASF REPORT EXTRACT
Cause: ALL CAUSE CODES, NCFS REPORTED FIRES/ACRES ONLY
By: DISCOVERY DATE



SACC Daily Outlook

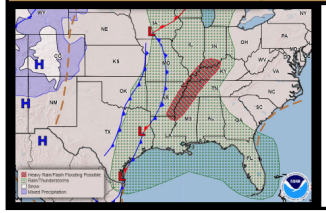
Tuesday, November 5, 2024

Watches, Warnings and Advisories



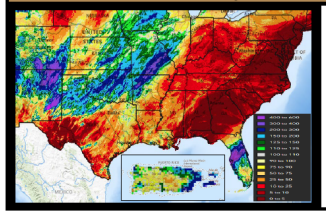
- **Tropical Storm Watches** in the Florida Keys and Dry Tortugas
- **Wind Advisory** in the TN mountains and southeast FL
- **Flood Watches, Flash Flood Warnings** and/or **Flood Advisories** in AR, PR
- **Coastal Flood Advisories** in TX, LA, MS, FL and NC
- **Flood Warnings** for rivers in OK, AR, TX, LA and FL
- **Dense Fog Advisory** in NC, VA
- **Freeze Warnings** and **Frost Advisories** in the TX/OK panhandles

Today's Weather Outlook



- Showers and thunderstorms will remain focused ahead of a cold front in the Mississippi Valley today, resulting in some severe weather and localized flooding
- Windy and unseasonably warm conditions ahead of the front will lead to increasing wildfire potential in drier parts of the Appalachians, in addition to parts of MS, AL and the FL panhandle
- A weak tropical disturbance passing over South FL will bring scattered showers and thunderstorms capable of heavy rainfall, while any wet weather elsewhere along the Gulf Coast and in the Southeast will be isolated
- Look for dry air to overspread western OK and TX where winds will otherwise be light

30-Day Percent of Normal Rainfall



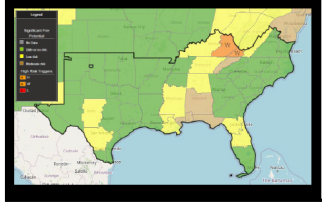
- Minimal to no rain has occurred in at least 30 days from the central Gulf Coast through the Appalachians and Mid-Atlantic states, continuing an historically dry stretch similar to 2016
- Flooding rain associated with Milton is still evident over the FL peninsula, where high water levels remain and could contribute to flooding from Rafael
- Extreme rainfall the past 3-5 days interrupted significant drought over the Plains and AR, where some 8-14" totals are estimated by radar; flooding may return to these areas as another storm moves in late this week and weekend
- Areas from LA into MS, western TN and KY have observed some rain the past 30 days, but amounts have mostly been well below normal
- Eastern PR has observed excessive rain on several occasions over the last 7-10 days, while other areas have seen below normal rainfall

Please contact your local National Weather Service office for spot forecasts and the latest watches and warnings.

SACC Daily Outlook

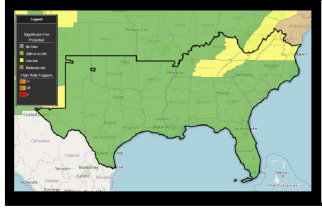
Tuesday, November 5, 2024

Significant Fire Potential Outlook Today



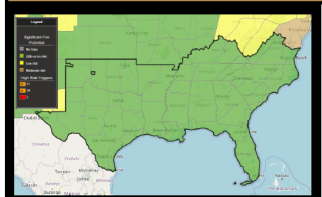
- **HIGH RISK:** multiple wildfires are evident on satellite in eastern KY and southwest VA this morning; record highs in the upper 70s to low 80s will be accompanied by S/SW winds gusting from 25-40 mph under abundant sunshine; RH will mostly be no lower than 40%
- Similar conditions are expected in the TN mountains, while RH will be higher just to the west; note that today's winds will accelerate leaf drop in higher elevations of the Appalachians; meanwhile, clouds and some light rain or drizzle will be scattered over the NC, SC and GA mountains due to upslope flow
- Gusty S winds will potentially result in increased fire danger over southern AL and MS into the western FL panhandle, where RH will generally hold above 45%; near-record highs are forecast, and winds will gust from 20-35 mph
- A few lightning holdovers could emerge in southwest and southern TX in areas that missed widespread rain; RH will drop to 20-25% today in these areas, while wind gusts up to 25 mph this morning will ease this afternoon

Significant Fire Potential Outlook Wednesday



- Clouds and humidity will increase over the Appalachians as a front settles in, while a few thunderstorms could lead to new ignitions and erratic winds over KY; record highs are likely in the Low Risk PSAs, while SW winds are forecast to gust from 15-30 mph; risk upgrades are possible for some of these PSAs tomorrow depending on clouds and wildfire activity today
- Dry return flow will set up over southwest/west TX tomorrow, but fuels are expected to be marginal
- Some Low Risks may be added into MS and AL depending on finer-scale weather conditions that are hard to determine as of today

Significant Fire Potential Outlook Thursday



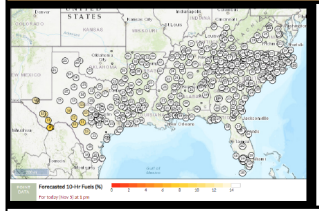
- A front moving through the Appalachians will result in mostly isolated precipitation, but lingering clouds and humidity should briefly improve the fire environment, except on a local basis
- Gusty winds are expected on the outskirts of Rafael for parts of the FL peninsula and Lower Mississippi Valley, but fuel conditions and high RH should result in minimal significant fire potential

National 7-Day Significant Fire Potential Outlook

SACC Daily Outlook

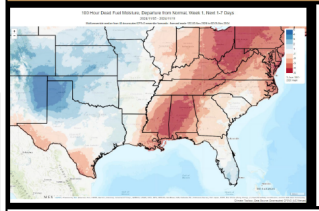
Tuesday, November 5, 2024

10-Hour Fuels



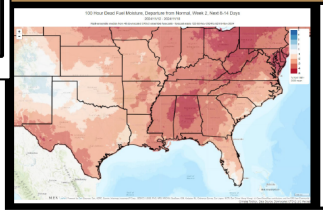
- 10-hour dead fuel moisture will be locally below normal in eastern KY and southwest VA into the mountains of TN today, with increasing values tomorrow and Thursday, followed by drying Friday into the weekend; uncertainty is high by Monday
- Elsewhere in the Southeast, areas of rain along with continued high RH will lead to above normal 10FM in most areas, but some drying may occur by the middle of next week
- Look for below normal 10FM in southwest and central TX today into tomorrow, with high RH returning thereafter; the Trans Pecos may stay abnormally dry through the period

100-Hour Fuel Moisture Anomalies Week One



- Long-term dryness will maintain drier than normal 100-hour fuels in areas that miss rain over MS, AL and the Appalachian states during the week ahead, but some of these areas are of lower confidence due to sizable uncertainties in how much rain occurs
- Rain in parts of GA and the Carolinas into GA will bring increasing 100FM
- Across the Plains and west side of the Mississippi Valley, recent rain along with a return of unsettled conditions will maintain below normal 100FM except along portions of the Rio Grande

100-Hour Fuel Moisture Anomalies Week Two



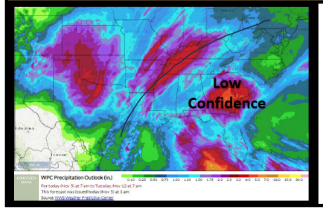
- A drier period appears increasingly likely heading into mid-November
- 100-hour dead fuel moisture anomalies for Nov 12-18 are depicted
- Quick drying will be possible as one or more dry cold fronts usher in much drier air later next week and beyond
- Areas that miss appreciable rain this week will see the driest conditions relative to normal, which is the current expectation from parts of MS and AL into the Appalachians
- Southwest TX is also forecasted to see continued drier than normal 100-hour fuels for this time of year
- Fire danger may increase appreciably in the darker red areas, especially if wetting rain does not occur over the next 6-10 days

North Carolina State University Fire Weather Intelligence Portal

SACC Daily Outlook

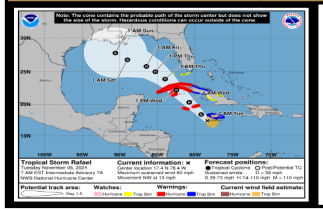
Tuesday, November 5, 2024

Forecast Rainfall the Next Week



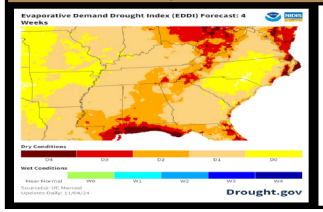
- Rainfall amounts throughout the Southeast are of low confidence, and at least scattered areas may not see wetting rain during the period
- Localized areas of extreme rainfall are expected in GA and SC tomorrow into Thursday, with some 4-8"+ amounts possible, but most areas will see much less
- Rainfall across FL will be associated with a tropical disturbance today and the outer bands of Rafael tomorrow into Friday; areas of flooding will be possible where the heaviest rain occurs
- Today's rain in the Mississippi Valley may be followed by another round over the weekend, but some of this will depend on Rafael's track and moisture plume
- Another round of heavy rain and severe weather is expected in the Plains late this week, with dry weather returning to most areas over the weekend

Tropical Storm Rafael



- Tropical Storm Rafael is becoming more organized this morning and is well on its way to becoming a hurricane in the next 24 hours
- Confidence is high in the northwestward track through early Thursday, which will bring impacts to the Florida Keys and Dry Tortugas late tomorrow into Thursday, including heavy rain, damaging winds, some storm surge and a few tornadoes
- Uncertainty is high in the track and intensity of Rafael later Thursday into the weekend, but the system should weaken if it approaches the Gulf Coast due to wind shear and dry air
- Additional tropical disturbances may affect the geographic area later this week into at least mid-November

Evaporative Demand Drought Index Forecast



- Longer-term drying potential appears highest from the Gulf Coast into portions of the Appalachians and Mid-Atlantic coast over the next four weeks
- The forecasted evaporative demand drought index takes into account temperatures, humidity, sunlight and winds from the CFSv2 model (link)
- The takeaway, should this verify and minimal/unfrequent wetting rain occur, is that fire potential may increase as drying conditions impact fuels in the region later in the month

Please contact your local National Weather Service office for spot forecasts and the latest watches and warnings.

Southern Area Daily Outlook Page:

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

Product provides weekly context for Southern Area (Tuesday - 11/5 Outlook shown) & is typically updated daily during high SA Planning Levels.

Post-Hurricane Considerations related to Fuels & Fire Danger

Abnormally dry conditions have spread across much of the state over the past month. Rainfall since TS Helene has been limited, with many areas well over 30-40 days since a ≥ 0.50" rainfall event. Example: Elizabeth City Coast Guard Air Station has recorded its 2nd driest October in 61 years of data, with only 0.30"of precip recorded (1st driest being in Yr 2000).

Duff consumption has been noted in several mountain FDRAs – enhancing resistance to control & later reburn risk with fall leaf-drop processes ongoing. Snags & older heavy down & dead fuels have also been noted as contributing to fire behavior on some drier/warmer aspects. Ground fire has been encountered in parts of the coastal organic soil areas, again leading to enhanced difficulty of control/mop-up. Generally green conditions have helped temper most IA – be aware of fuels transitioning to dormant/cured condition.

Generally moist air has been in place over the state recently with good overnight recoveries. However, an eventual return of dry "fall" air will quickly cause dead fuels to dry again, especially where repeated poor overnight recovery happens (like earlier in October). Be watchful for situations where consecutive days of dry air aligns with higher air temps, vegetative dormancy, wind and heavy loading of drying storm debris as we progress into winter.

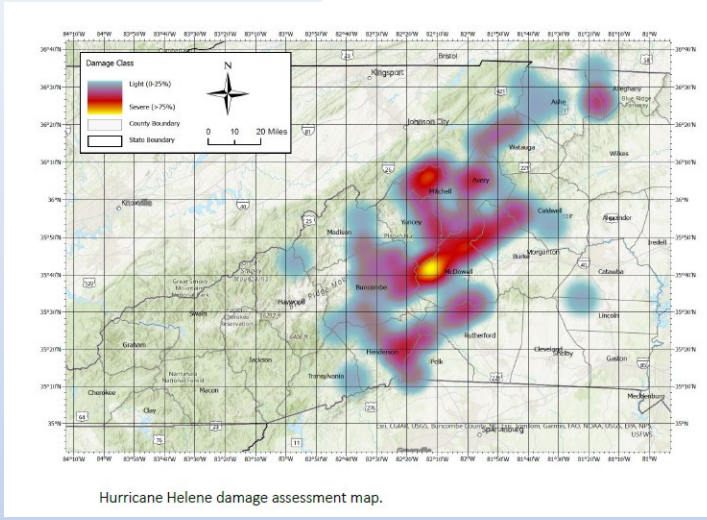
Relative greenness of live fuels is in decline as more frost/freeze events come + respond to daily decrease in daylength until around December 21st (Winter Solstice). This means more fuels will become available, including herbaceous species helping reduce road shoulder fires/debris burn escapes & difficulty of control.

Storm impacted areas - additional fuel loading, landslide related concerns, many more overhead hazards & limited access to new fire starts will likely hinder traditional initial attack methods, line production rates & overall speed of control/mop-up. This is on top of the normal Fall Fire Season load that builds through November. Map image on top right indicates general level of forest damage based on a recent aerial survey completed by NCFS.

Useful resources to review:

NCFS R3: Considerations for Fire Control Operations in Storm Damaged Areas of Western NC
SA: Post-Hurricane Fuels and Suppression Considerations Bulletin

NORTH CAROLINA
FOREST DAMAGE APPRAISAL
HURRICANE HELENE
September 2024



Hurricane Helene damage assessment map.

Figure 2: Typical damage on a windward (southerly) slope in the

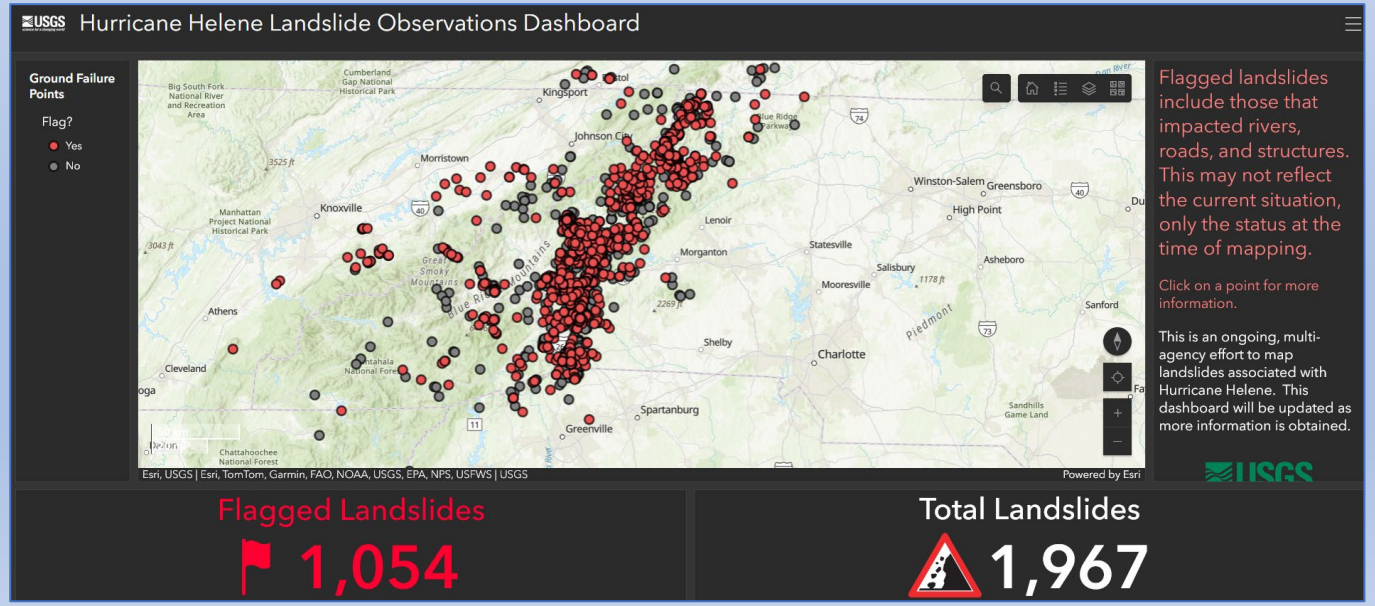
Right Bottom: Duff consumption in R3/D2/Wilkes Co.

Above: Ground fire in R1/D7/Pasquotank Co.

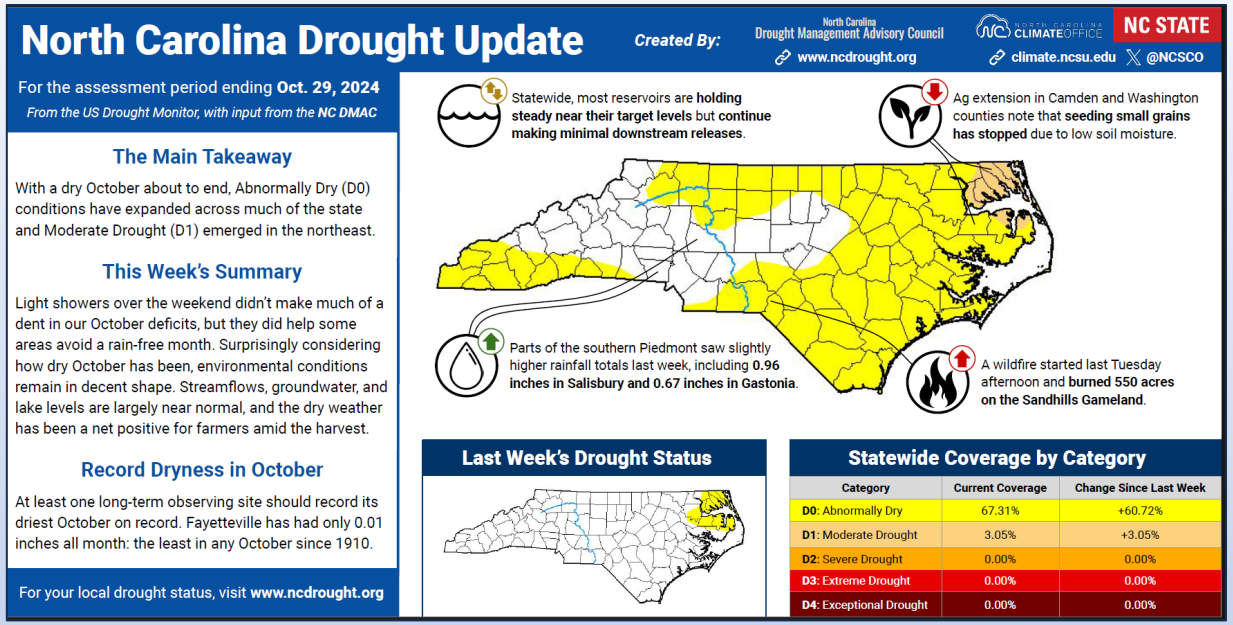
Landslide Information/Safety

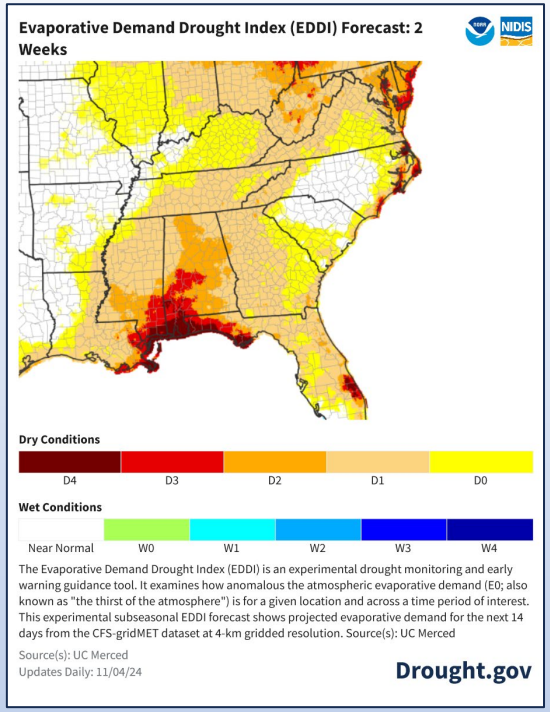
- Concerns for additional landslide activity still exist, especially with rainfall interacting with already unstable soil.
- See the following link (here) for variety landslide information including topics on types of slides, historical locations, etc.
- See section on **“Indicators That Further Movement is Likely In The Upslope Area” & “Movement Indicators”.**
- NCGS Viewer: *https://experience.arcgis.com/experience/b55c8497d115400aa09d9cb7a27f5dc8/*
- USGS Hurricane Helene Landslide Observation Dashboard: *https://www.arcgis.com/apps/dashboards/01b4f51fc0b64002bf7722a9acfc181d*

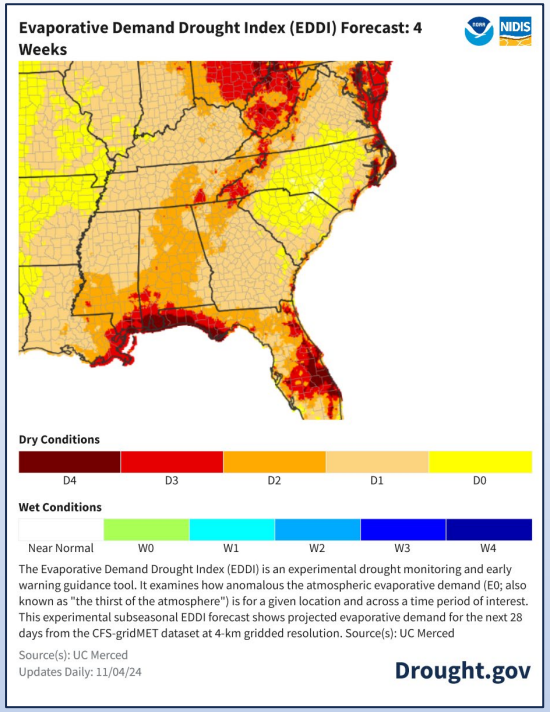
Hurricane Helene 2024
Landslide Observations (USGS)
– image from 1200 on 11/5 –



https://www.drought.gov/data-maps-tools/evaporative-demand-drought-index-eddi-subseasonal-forecasts





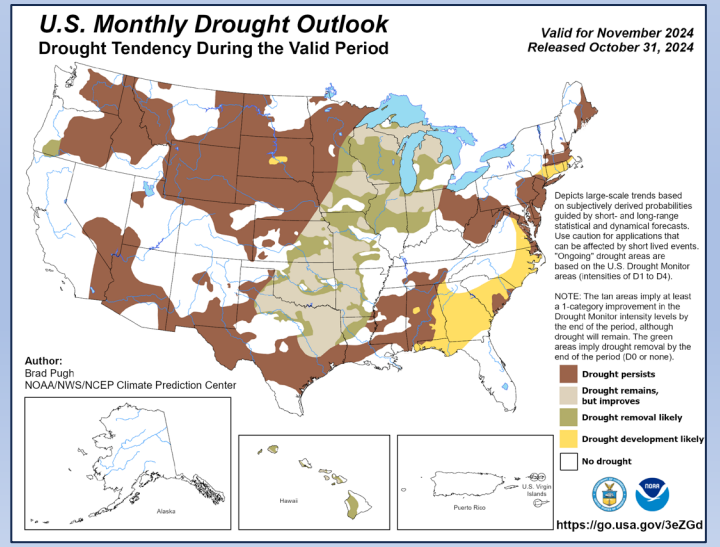


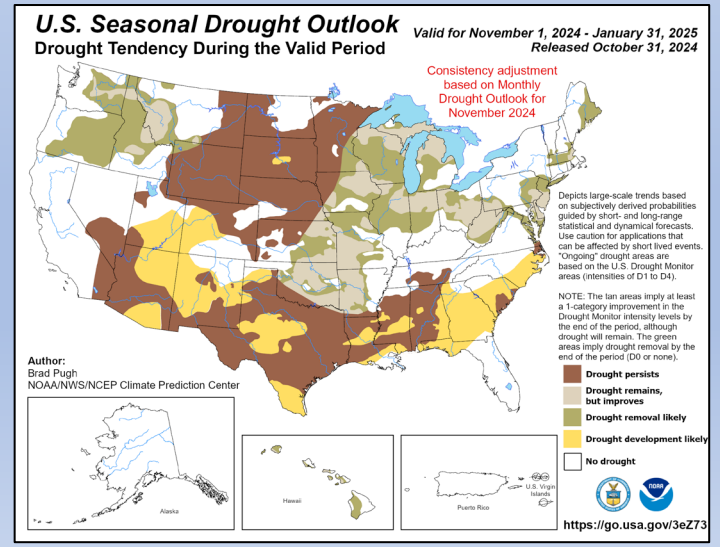
EDDI & Drought

EDDI Maps - The EDDI maps at the top right illustrate modeled evaporative demand at the two-week and four-week level. They represent enhanced drying potential later in the period as warmer conditions are forecast to return.

US Drought Monitor – USDM map released last week, note extension of D0 and D1 last week.

US Monthly & Seasonal Drought Outlook - released on 10/31/24, shown at bottom right. See detailed state/regional discussions here. *All of this is dependent upon any potential tropical related influence and/or any eventual La Nina associated impacts.*





Daily WIMS Observations and NFDRS Estimates

Averaged by FDRA SIG Group
This is available on the FWIP at: https://products.climate.ncsu.edu/fwip/nfdrs.php?data=ob&state=NC

- 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, not live fuel moisture sampling. Actual green-up is variable across the landscape.

Daily WIMS Forecast Observations and NFDRS Estimates are also available

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

11/4/24 Observations

Averages by FDRA

FDRA	STATION_COUNT	NFDR_DATE	BI	ERC	IC	SC	KBDI	1HR	10HR	100HR	1000HR	HRB	WOODY	TEMP	RH	WIND	PRECIP	DUR
Southern Highlands	3	2024-11-04	35.17 61.1%	12.73 37.1%	1.97 38.7%	19.90 68.3%	312.33	28.14 89.3%	22.20 73.8%	23.69 90.7%	22.15 76.3%	53.23	66.00	58.3°F	89.3%	SSE 4.7 mph	0.05 in.	2.7
Central Mountains	3	2024-11-04	13.67 19.4%	6.17 18.3%	0.23 15.5%	5.27 31.7%	327.33	29.37 91.5%	20.53 70.5%	22.79 88.6%	22.52 92.5%	41.77	58.00	53.0°F	91.3%	SE 1.3 mph	0.06 in.	2.0
Northern Highlands	2	2024-11-04	22.80 40.4%	7.90 28.8%	0.90 34.2%	11.70 59.4%	274.50	20.86 74.7%	22.39 73.0%	21.56 82.1%	22.63 91.2%	80.75	98.50	51.0°F	82.5%	S 2.0 mph	0.00 in.	0.0
Blue Ridge Escarpment	3	2024-11-04	64.90 69.6%	28.50 67.6%	2.97 38.3%	29.37 69.6%	352.00	15.59 68.3%	17.93 53.7%	20.32 58.2%	21.10 66.0%	61.50	76.67	55.0°F	68.7%	SE 2.7 mph	0.00 in.	0.0
Western Piedmont	3	2024-11-04	82.93 73.2%	41.43 73.4%	4.00 41.0%	32.60 73.5%	330.67	14.82 73.2%	19.49 70.4%	20.97 80.8%	22.28 87.4%	30.00	50.00	65.0°F	61.0%	ENE 4.0 mph	0.00 in.	0.0
Sandhills	2	2024-11-04	29.10 31.5%	37.90 46.3%	6.00 39.4%	3.80 32.9%	396.00	12.31 56.8%	17.36 54.1%	21.44 78.1%	21.01 77.5%	144.45	133.00	71.7°F	57.7%	E 3.3 mph	0.00 in.	0.0
Eastern Piedmont	4	2024-11-04	75.08 41.8%	32.38 37.0%	3.65 30.6%	33.75 52.4%	295.75	15.40 71.5%	21.27 77.1%	20.63 78.5%	22.32 89.0%	30.00	60.00	67.5°F	67.0%	SE 6.0 mph	0.00 in.	0.0
Southern Coastal	7	2024-11-04	35.34 28.3%	19.40 26.5%	2.79 29.1%	12.29 30.9%	447.86	14.66 68.4%	21.11 76.0%	21.40 71.9%	22.44 77.3%	71.20	152.57	75.7°F	63.1%	NE 5.1 mph	0.00 in.	0.0
Northern Coastal	4	2024-11-04	49.50 35.9%	28.68 42.1%	3.65 35.0%	15.80 31.8%	474.75	13.91 64.4%	19.92 73.4%	20.17 64.9%	21.64 81.5%	50.00	112.50	73.8°F	62.0%	E 4.0 mph	0.00 in.	0.0

GSI driven live fuel moisture **models** for each FDRA are transitioning to dormancy due to lack of rain, temps & seasonal daylength decreases. This transition to theoretical "dormancy" elevates indices along with KBDI scaling influences (drought loading).

*Each FDRA has "GSI" settings/adjustments that run independently of the other FDRAs (part of NFDRS V4 settings for each station), hence transition timing differences (when not related to larger scale weather influences such as widespread/multiple freeze events).

Important notes for next slide group:

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

- These are extracts from FF+ using daily observation data downloaded from WIMS.

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

- Available on the FWIP within the "Resources for NCFS" page.
- The operation link is: https://products.climate.ncsu.edu/fwip/outlook.php
- 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:

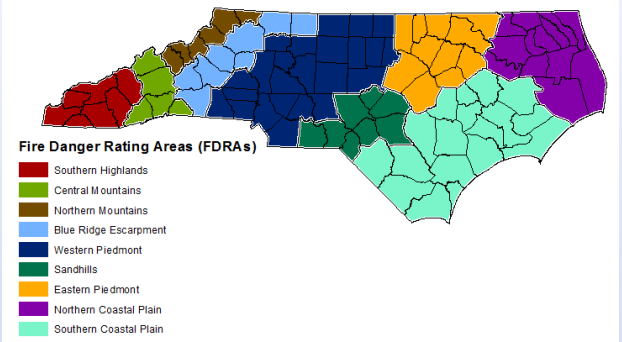
- Low to Moderate (0 to 74th percentile); shown in blue-green
- High (75th to 89th percentile); shown in yellow
- Very High to Extreme (90th+ percentile); shown in red and labeled as Critical

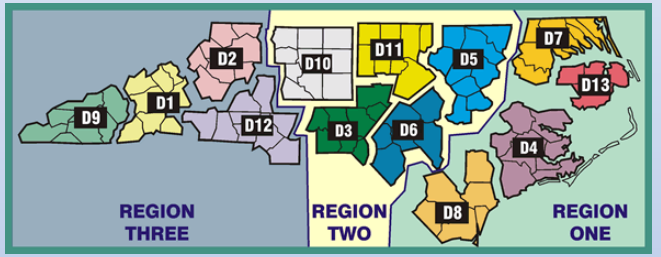
Dead fuel moisture forecast values are grouped into three categories based on historical percentiles, assessed using the FF+ All Days filter through 2021:

- Low to Moderate (26th to 100th percentile); shown in blue-green
- 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.



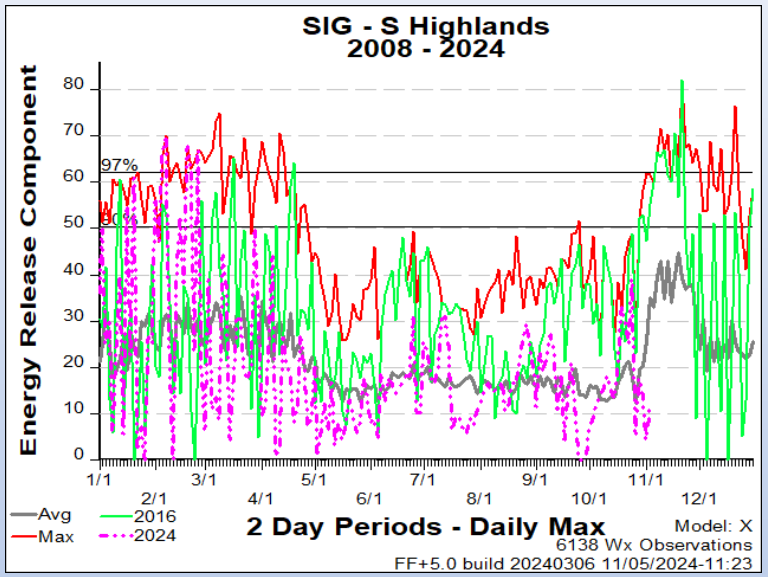


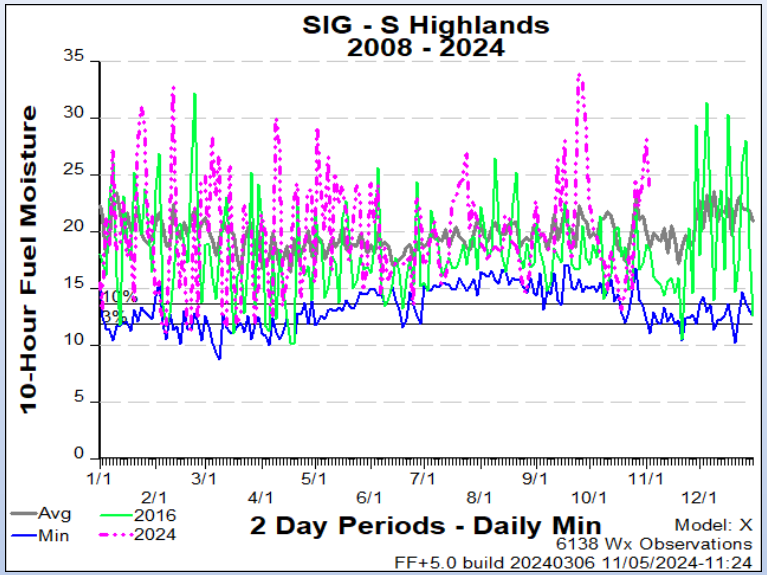
To reduce duplication & increase situational awareness, slides 15-38 are organized by FDRA in this order:

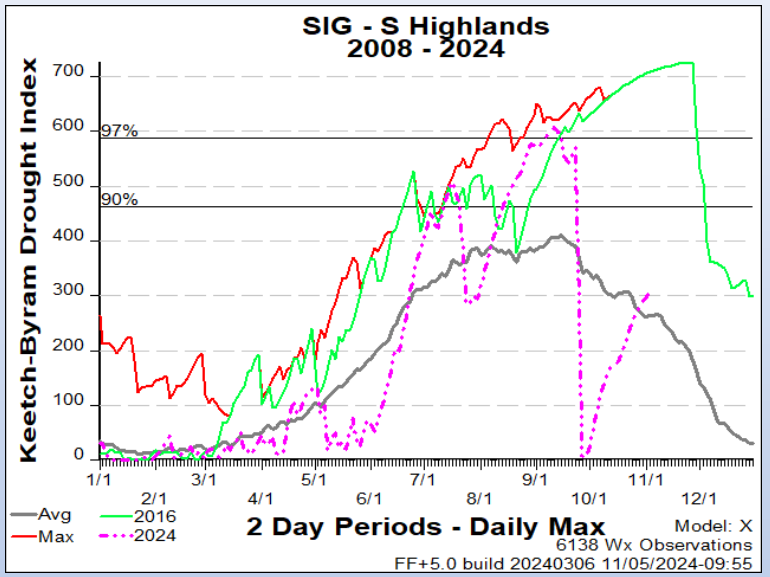
**(R3 = Region 3, R2 = Region 2, R1 = Region 1)*

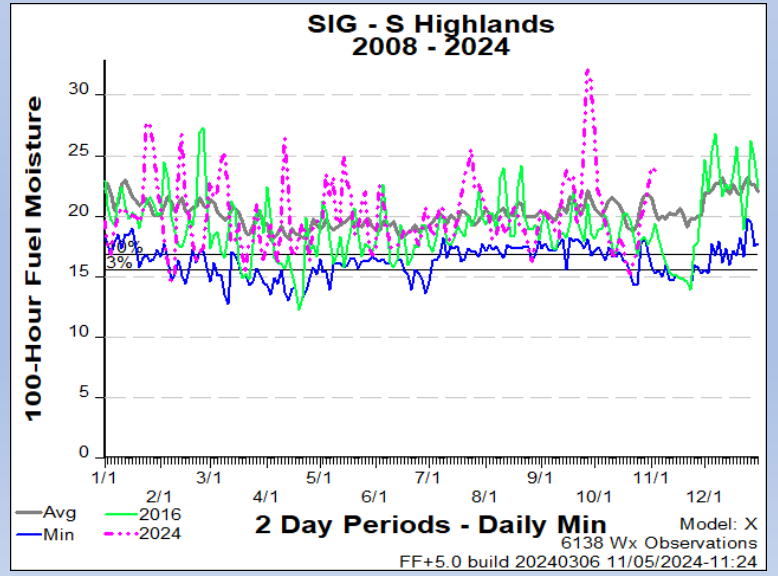
- Southern Highlands (R3)
- Central Mountains (R3)
- Northern Highlands (R3)
- Blue Ridge Escarpment (R2 & R3)
- Western Piedmont (R2 & R3)
- Eastern Piedmont (R2)
- Sandhills (R2)
- North Coast (R1)
- South Coast (R1 & R2)

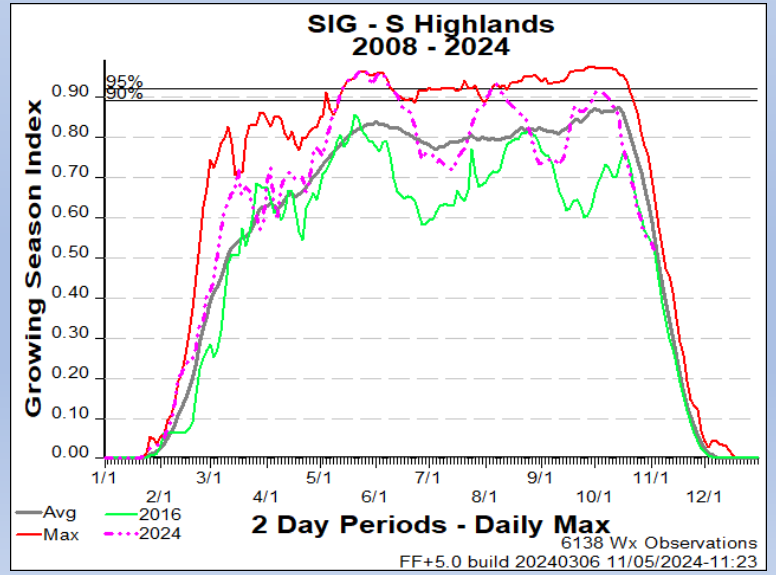
FDRA – Southern Highlands

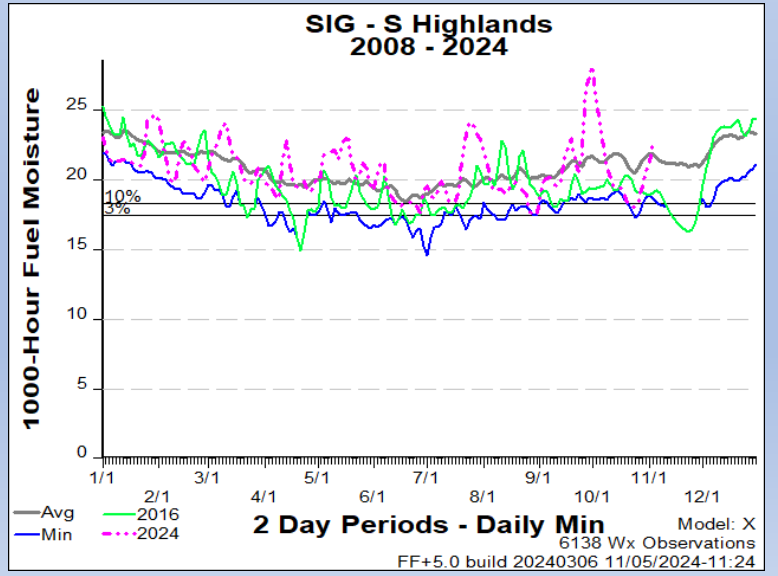






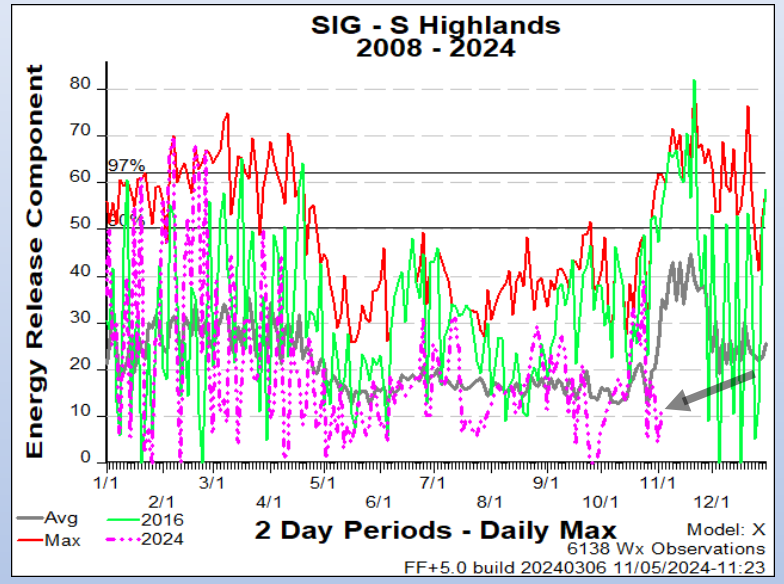




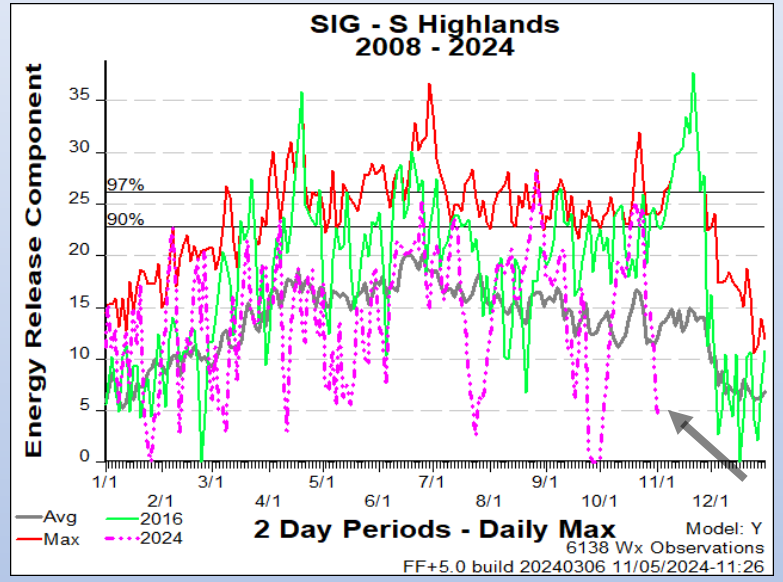


FDRA – Southern Highlands

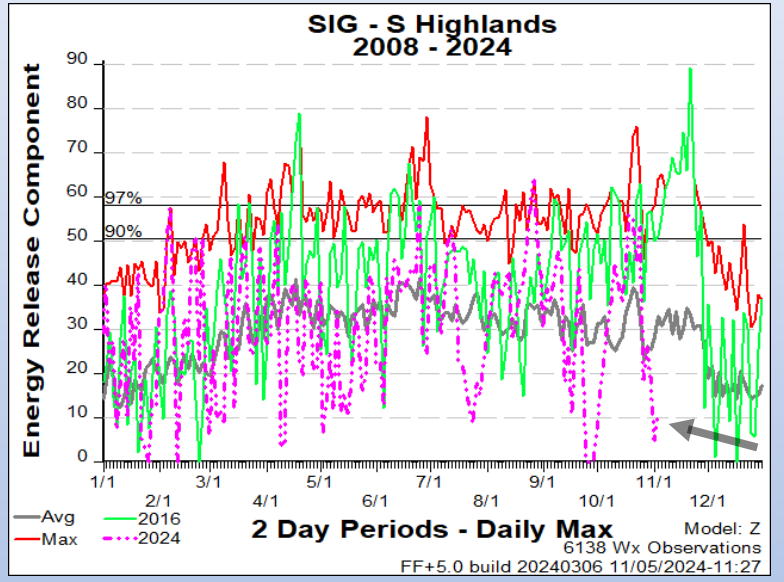
ERC-X



ERC-Y



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

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Average, Max, CY Year 2016 are displayed along with Year-to-Date 2024

Weekly Outlook

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 05-Nov	WED 06-Nov	THU 07-Nov	FRI 08-Nov	SAT 09-Nov	SUN 10-Nov	MON 11-Nov
Avg. Max. Temp. (°F)	65	69	69	66	64	64	65
Avg. Min. Humidity (%)	76	80	78	83	83	79	68
Avg. 20' Wind Speed (mph)	6	3	2	2	4	4	3
Avg. Wind Direction*	SSE	SSE	ESE	E	SE	SSE	W
Avg. Probability of Precip. (%)	28	44	29	37	52	48	36
Days Since a Wetting Rain**	9.7	2.0	2.7	3.7			
Forecast ERC (Fuel Model X)	10.8	10.9	7.3	8.7	8.3	8.8	15.5
Forecast BI (Fuel Model X)	44.6	35.0	25.8	30.3	30.7	34.2	53.4
Forecast IC (Fuel Model X)	1.8	1.2	0.7	0.9	0.8	0.9	1.4
Forecast 100-Hr. FMC	23.9	24.2	24.9	25.1	25.5	25.7	25.8
Forecast 1000-Hr. FMC	22.3	22.5	22.8	23.0	23.2	23.4	23.6
KBDI	312.3						

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

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

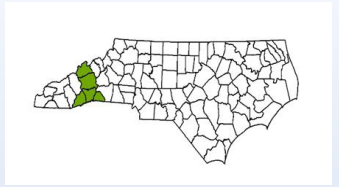
- **Tusquitee** (315602)
- **Locust Gap** (315802)
- **Highlands** (315803)

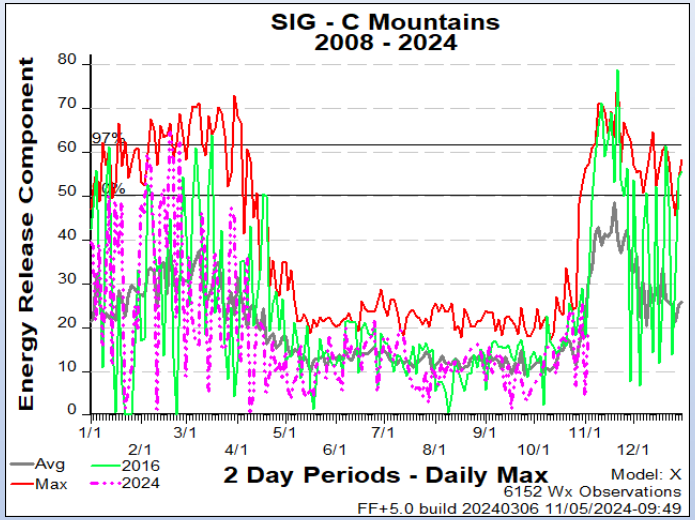
KEY	Low to Moderate Burning Conditions	Burning Conditions Can be High CAUTION	Burning Conditions Can be Critical WATCH OUT!
Avg. Max. Temp.	Less than 50°F	Between 50°F and 55°F	Greater than 55°F
Avg. Min. Humidity	Greater than 35%	Between 30% and 35%	Less than 30%
Avg. 20' Wind Speed	Less than 5 mph	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 defined as 0.10" or greater. This is an average of the FDRA stations noted above.		
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

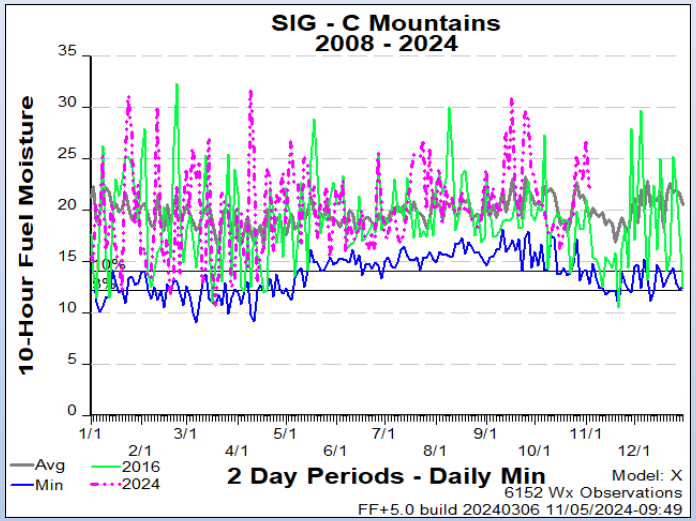
Other factors to consider when determining fire danger: **sky conditions**, **precipitation amount**, **number of days since rain**, and **season**

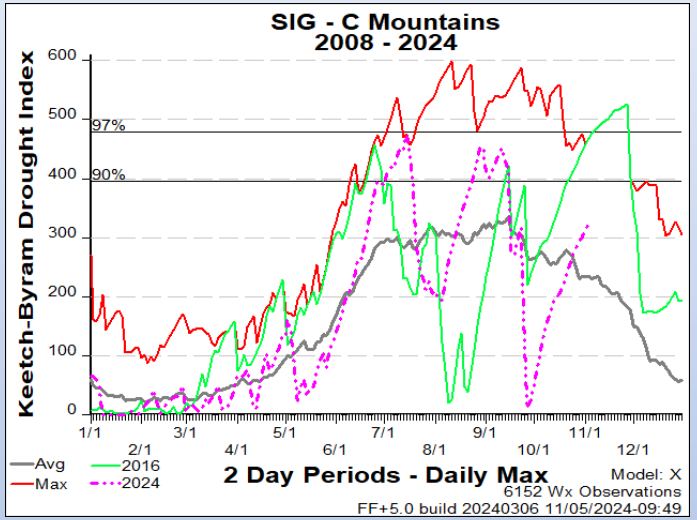
0-74th; 75-89th; 90th+ (Indices)
26-100th; 11-25th; 0-10th (Fuel Moisture)

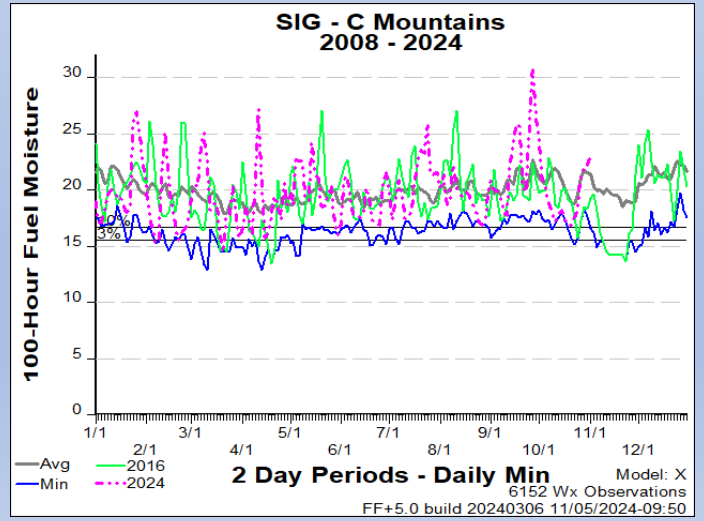
FDRA – Central Mountains

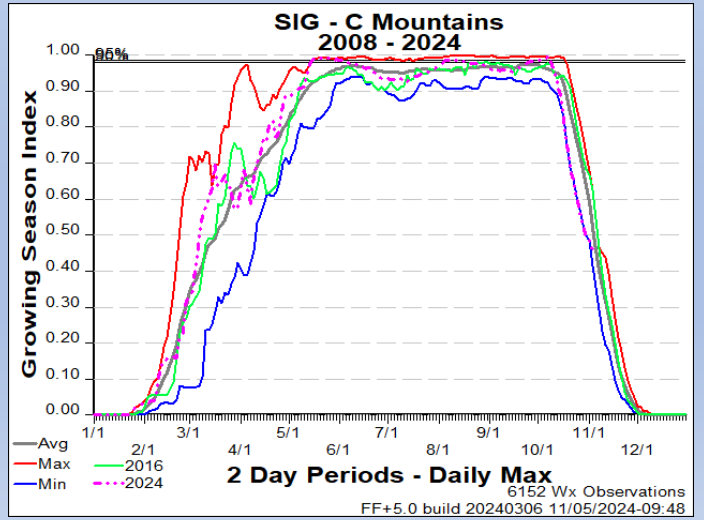


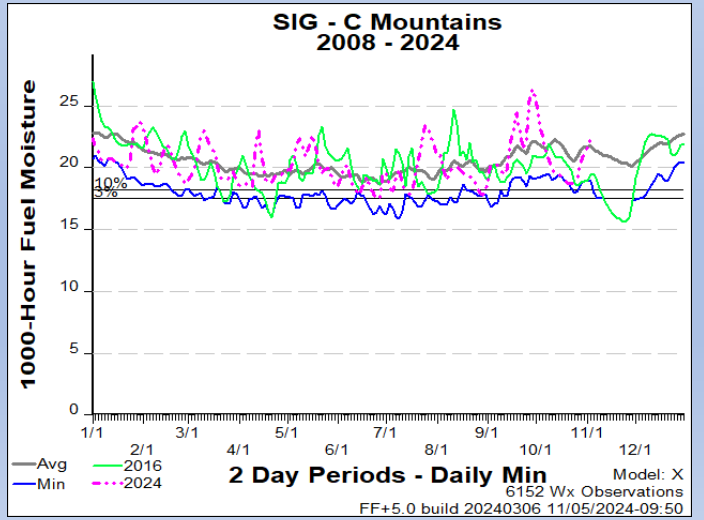




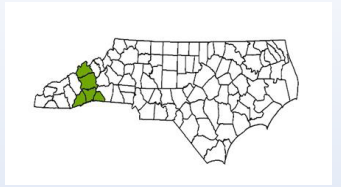




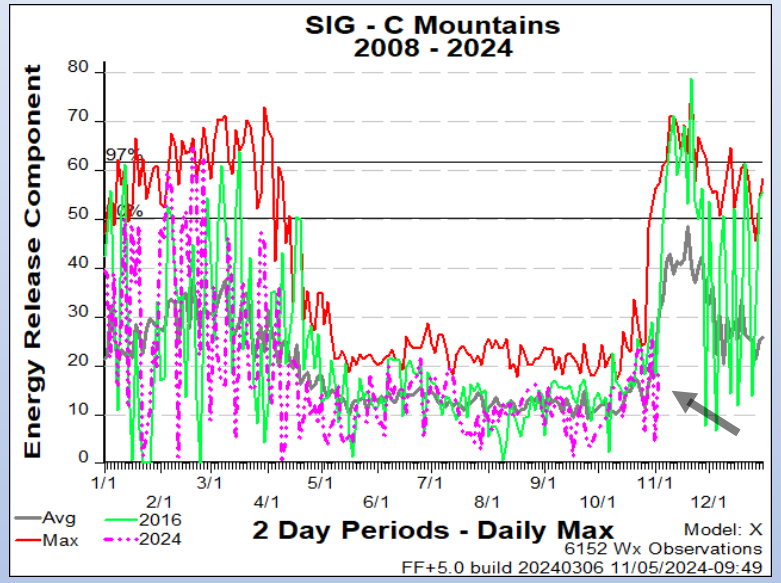




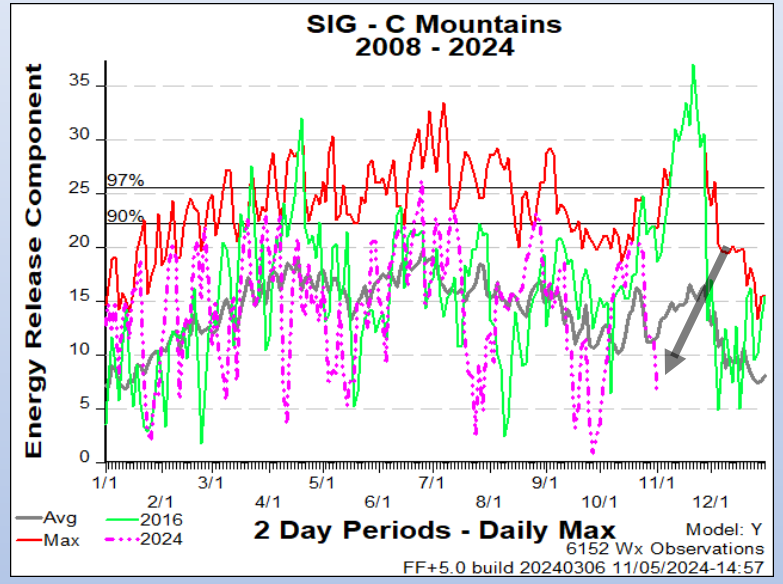
FDRA – Central Mountains



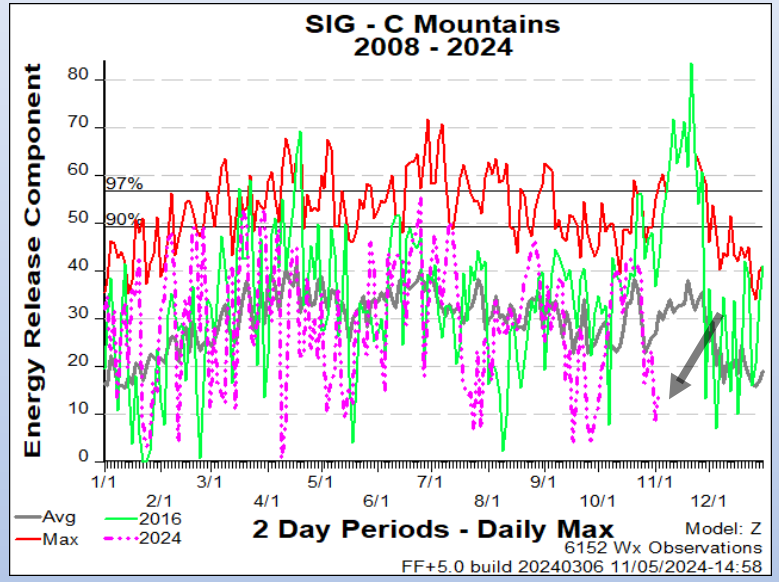
ERC-X



ERC-Y



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

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Average, Max, CY Year 2016 are displayed along with Year-to-Date 2024

Weekly Outlook

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 05-Nov	WED 06-Nov	THU 07-Nov	FRI 08-Nov	SAT 09-Nov	SUN 10-Nov	MON 11-Nov
Avg. Max. Temp. (°F)	63	74	74	71	68	70	70
Avg. Min. Humidity (%)	89	73	73	74	73	71	62
Avg. 20' Wind Speed (mph)	5	3	2	2	4	5	4
Avg. Wind Direction*	SSE	SSE	ESE	E	SE	SSE	W
Avg. Probability of Precip. (%)	60	45	33	35	51	48	38
Days Since a Wetting Rain**	12.7	12.7	13.0	14.0			
Forecast ERC (Fuel Model X)	3.5	12.2	12.0	10.2	10.4	13.3	22.1
Forecast BI (Fuel Model X)	15.0	35.6	33.1	30.5	32.5	41.3	65.4
Forecast IC (Fuel Model X)	0.3	1.2	1.2	0.9	0.9	1.3	2.1
Forecast 100-Hr. FMC	23.2	23.8	24.3	24.6	24.8	24.9	24.8
Forecast 1000-Hr. FMC	22.6	22.8	23.1	23.1	23.3	23.3	23.5
KBDI	327.3						

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

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

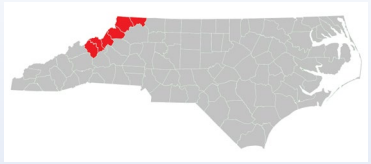
- **7 Mile Ridge** (313302)
- **Davidson River** (316001)
- **Mtn Horticultural Crops Res Stn** (316141)

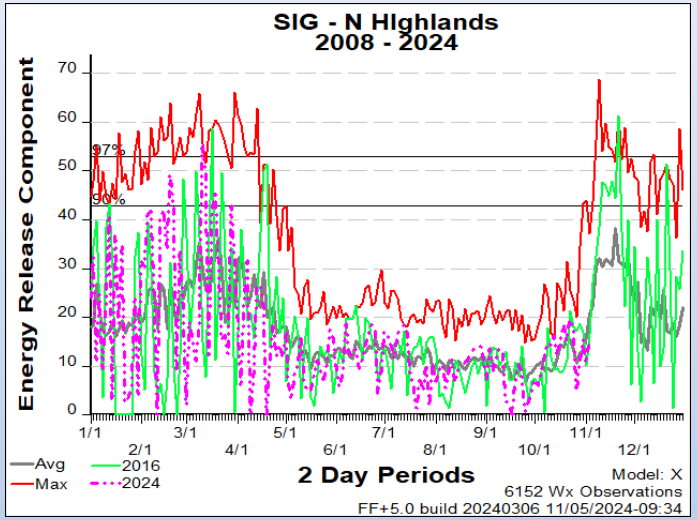
KEY	Low to Moderate Burning Conditions	Burning Conditions Can be High CAUTION	Burning Conditions Can be Critical WATCH OUT!
Avg. Max. Temp.	Less than 50°F	Between 50°F and 60°F	Greater than 60°F
Avg. Min. Humidity	Greater than 35%	Between 30% and 35%	Less than 30%
Avg. 20' Wind Speed	Less than 5 mph	Between 5 mph and 10 mph	Greater than 10 mph
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 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

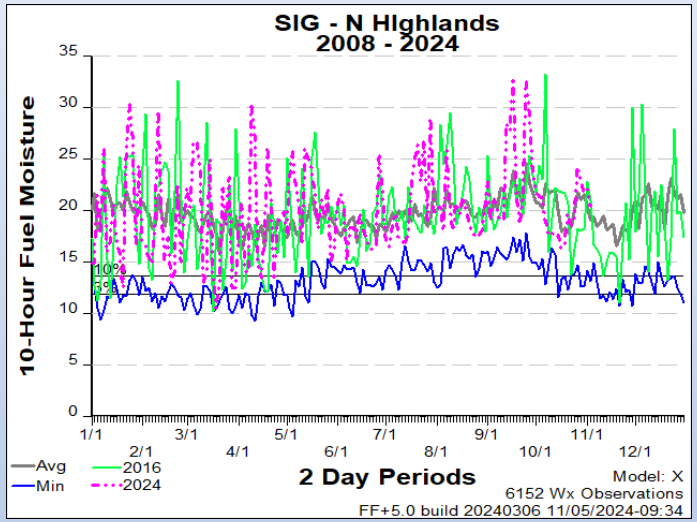
Other factors to consider when determining fire danger: **sky conditions**, **precipitation amount**, **number of days since rain**, and **season**

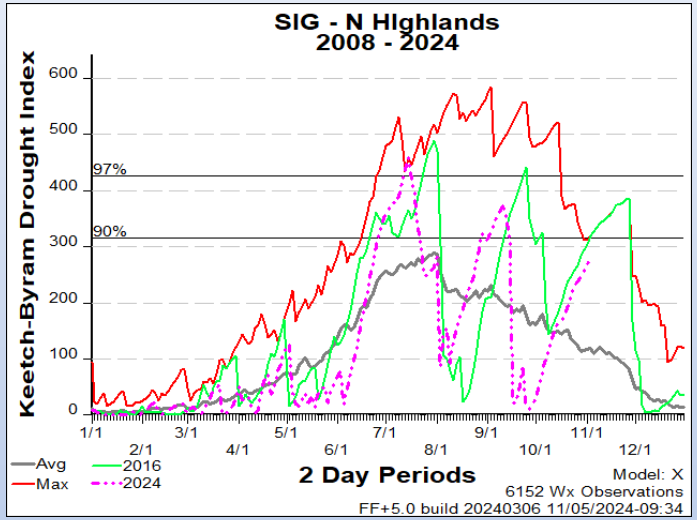
0-74th; 75-89th; 90th+ (Indices)
26-100th; 11-25th; 0-10th (Fuel Moisture)

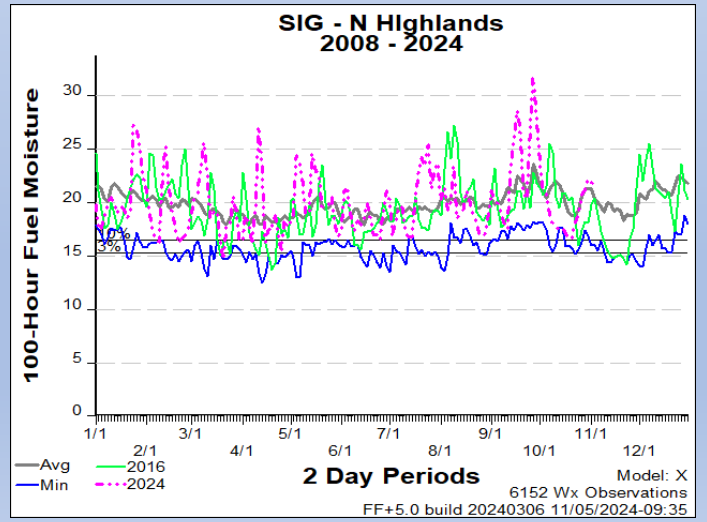
FDRA – Northern Highlands

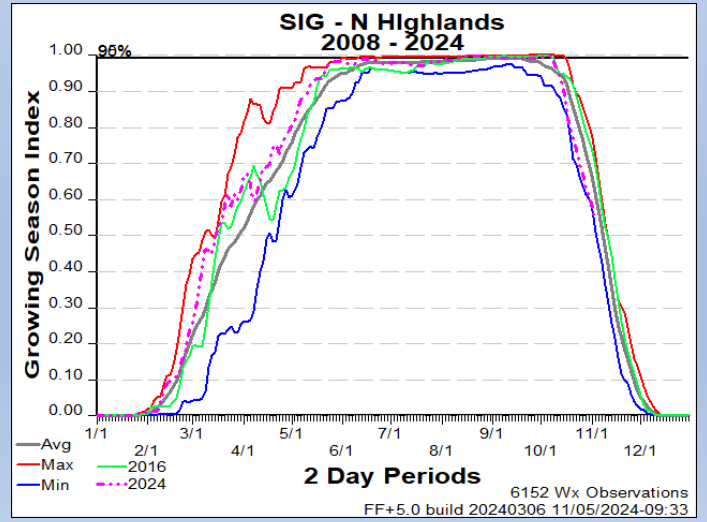


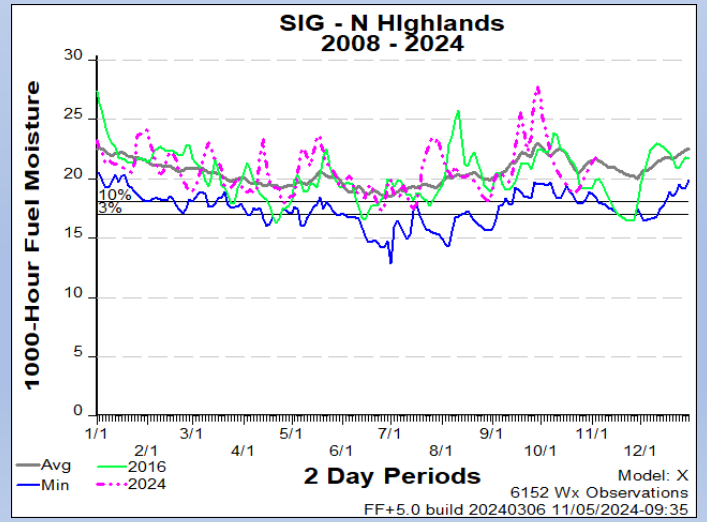




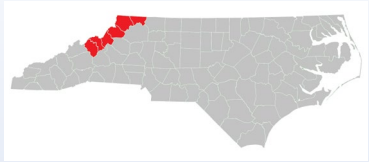




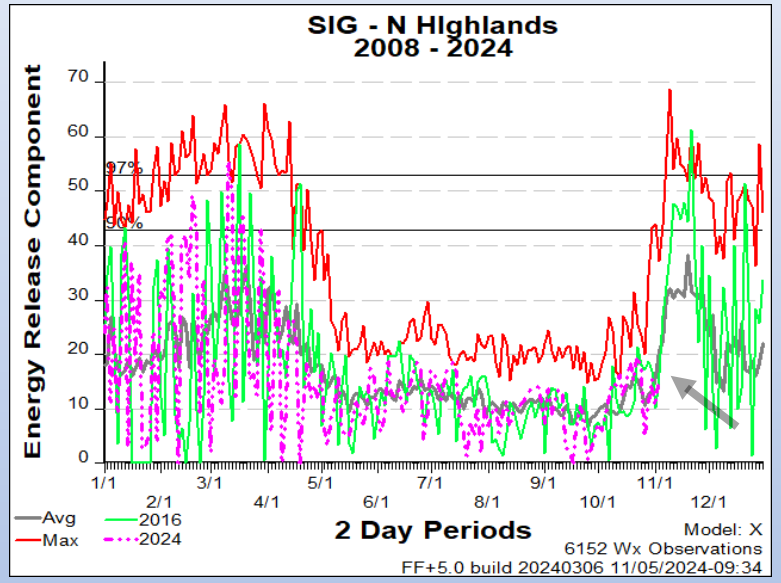




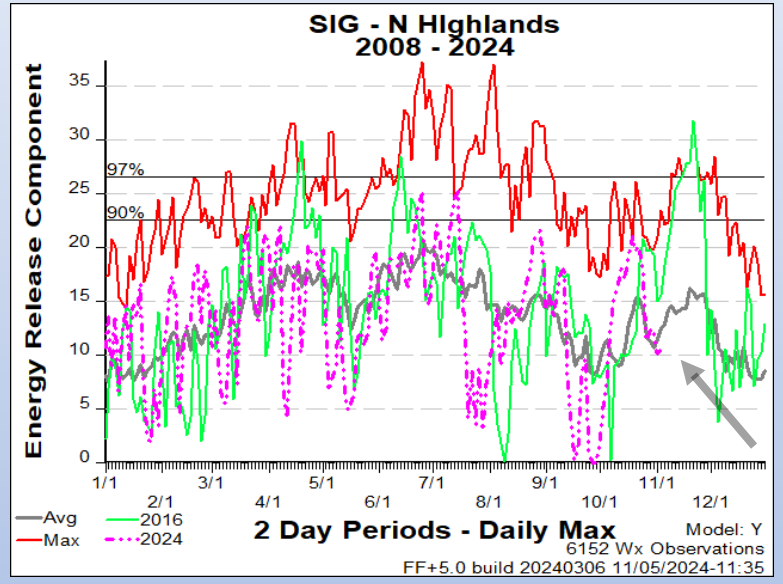
FDRA – Northern Highlands



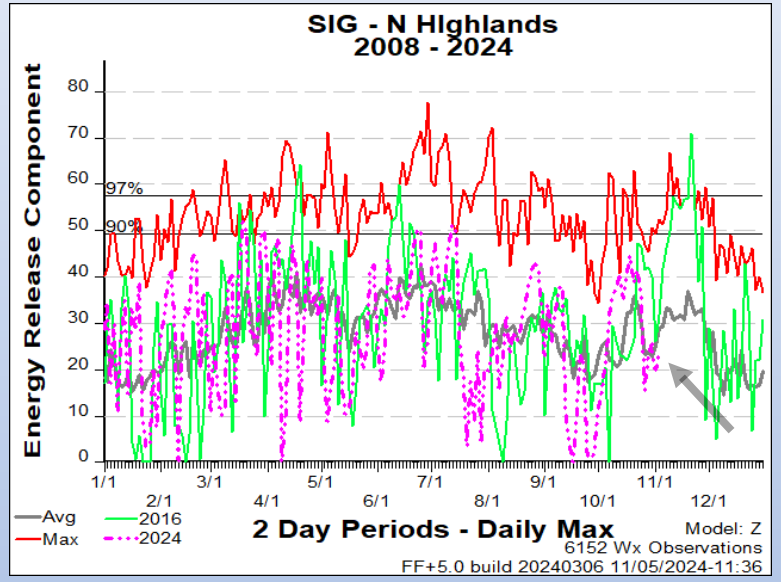
ERC-X



ERC-Y



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

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Average, Max, CY Year 2016 are displayed along with Year-to-Date 2024

Weekly Outlook

Northern 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 05-Nov	WED 06-Nov	THU 07-Nov	FRI 08-Nov	SAT 09-Nov	SUN 10-Nov	MON 11-Nov
Avg. Max. Temp. (°F)	59	70	70	68	61	64	66
Avg. Min. Humidity (%)	94	83	80	77	80	82	70
Avg. 20' Wind Speed (mph)	5	4	3	3	4	5	5
Avg. Wind Direction*	S	S	SSE	ENE	ESE	S	W
Avg. Probability of Precip. (%)	72	38	30	27	44	43	33
Days Since a Wetting Rain**	0.3	0.0	0.7	1.7			
Forecast ERC (Fuel Model X)	4.0	3.8	4.7	5.9	7.3	7.2	8.7
Forecast BI (Fuel Model X)	15.5	15.6	17.9	21.4	25.8	26.4	30.2
Forecast IC (Fuel Model X)	0.2	0.2	0.3	0.5	0.8	0.7	1.0
Forecast 100-Hr. FMC	22.1	22.6	23.2	23.6	23.9	23.9	23.8
Forecast 1000-Hr. FMC	22.8	22.8	22.9	22.9	23.0	23.1	23.2
KBDI	274.5						

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

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

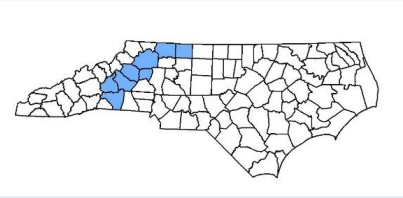
- **Laurel Springs** (310101)
- **Upper Mountain Research Stn** (310141)
- **Busick** (313402)

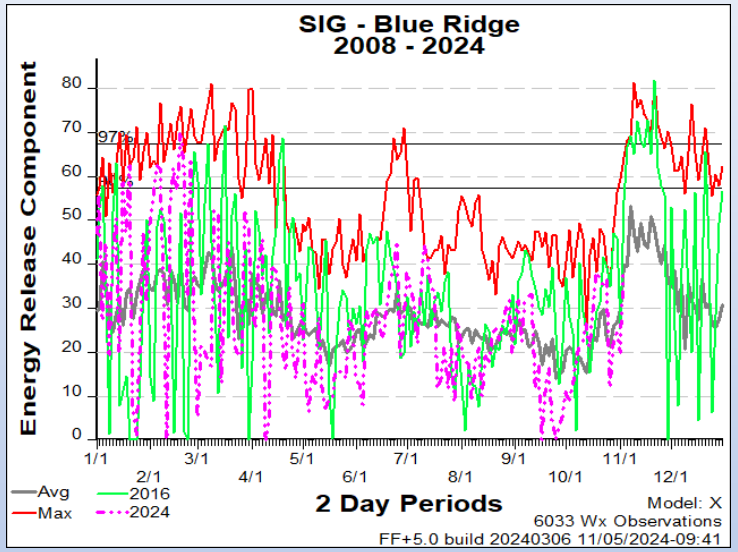
KEY	Low to Moderate Burning Conditions	Burning Conditions Can be High CAUTION	Burning Conditions Can be Critical WATCH OUT!
Avg. Max. Temp.	Less than 50°F	Between 50°F and 58°F	Greater than 58°F
Avg. Min. Humidity	Greater than 35%	Between 30% and 35%	Less than 30%
Avg. 20' Wind Speed	Less than 2 mph	Between 2 mph and 5 mph	Greater than 5 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 26	Between 26 and 46	Greater than 46
Burning Index	Less than 67	Between 67 and 108	Greater than 108
Ignition Component	Less than 5	Between 5 and 9	Greater than 9
100-Hour Fuel Moisture	Greater than 18%	Between 17% and 18%	Less than 17%
1000-Hour Fuel Moisture	Greater than 20%	Between 19% and 20%	Less than 19%
KBDI	Less than 192	Between 192 and 330	Greater than 330

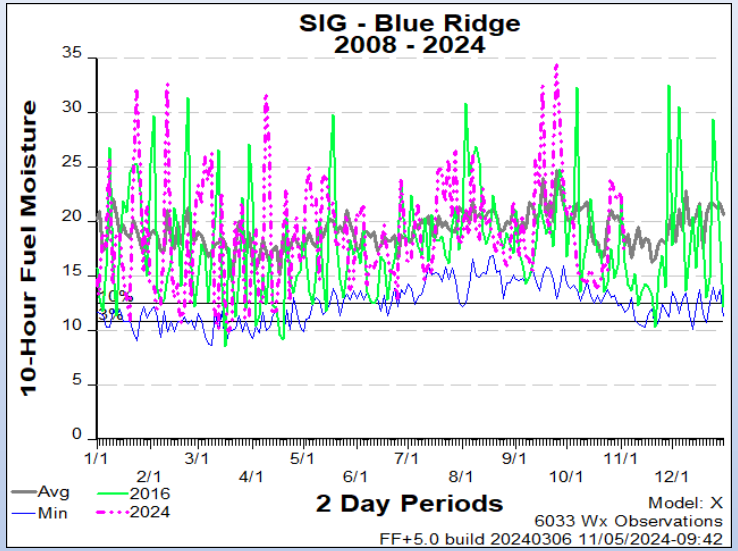
Other factors to consider when determining fire danger: **sky conditions**, **precipitation amount**, **number of days since rain**, and **season**

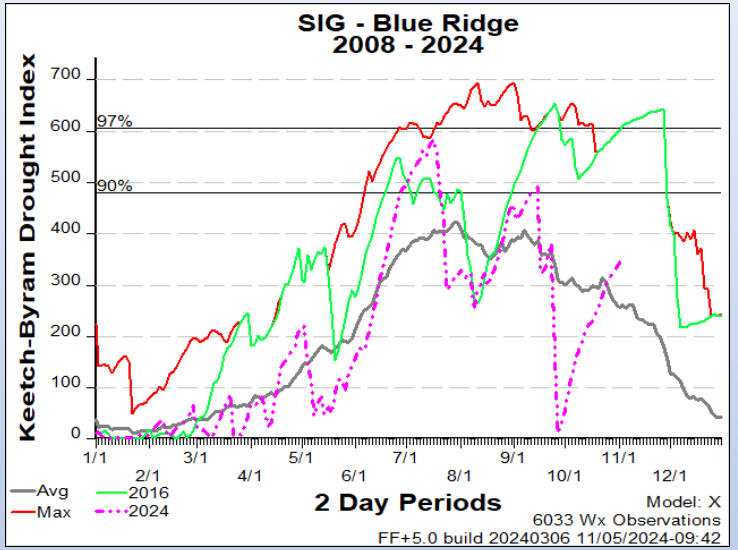
0-74th; 75-89th; 90th+ (Indices)
26-100th; 11-25th; 0-10th (Fuel Moisture)

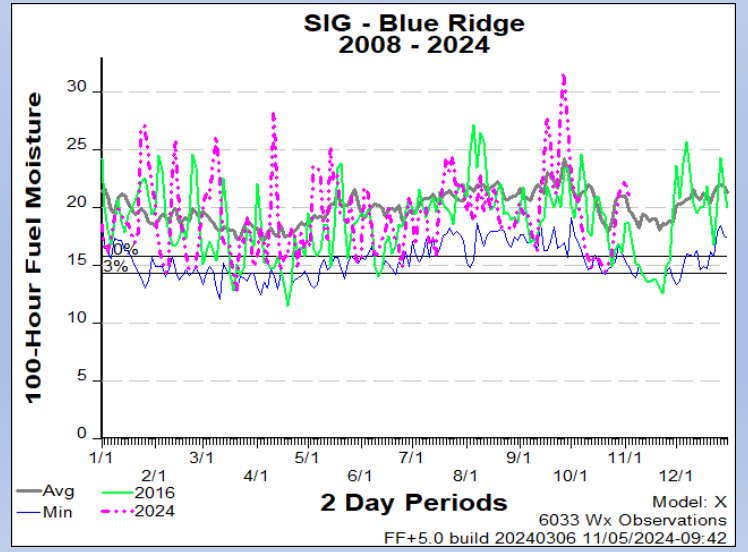
FDRA – Blue Ridge Escarpment

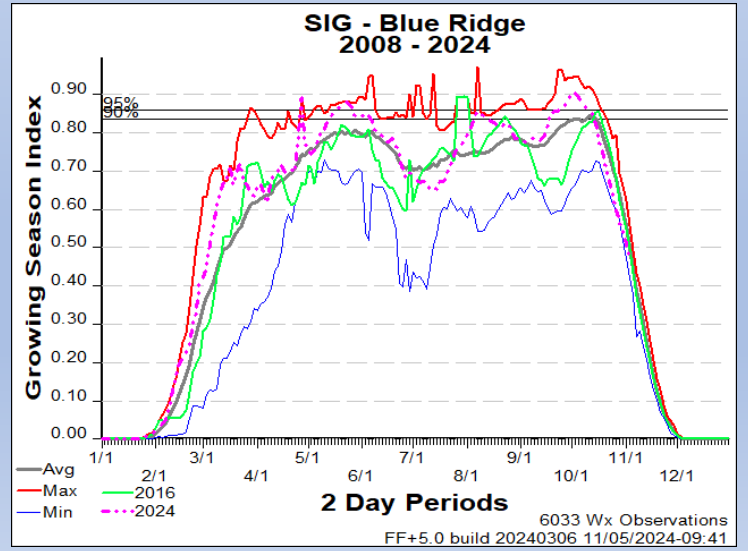


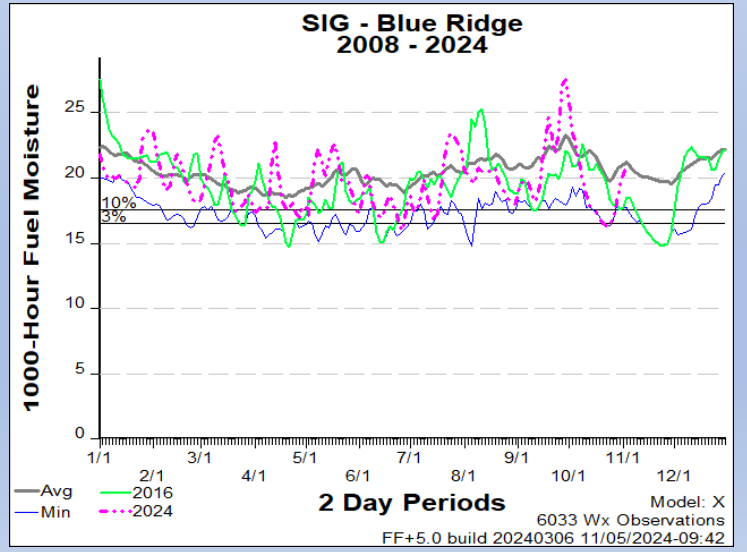




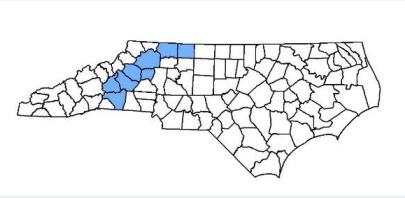




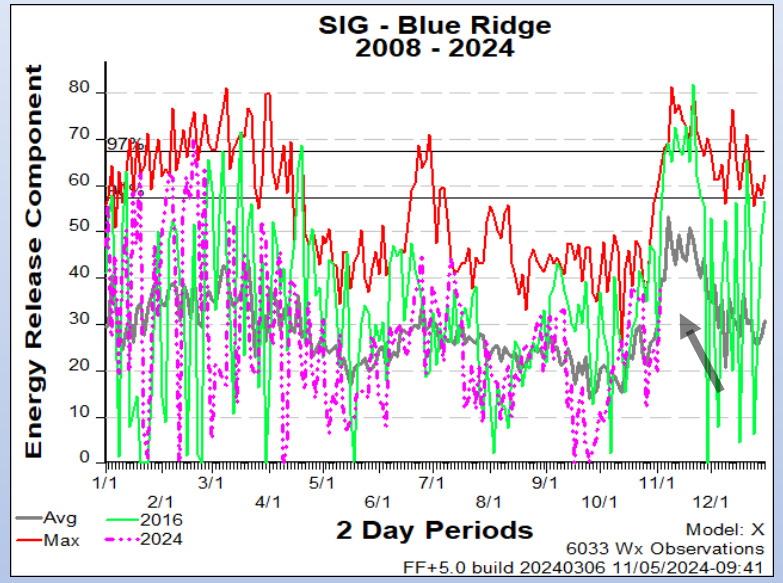




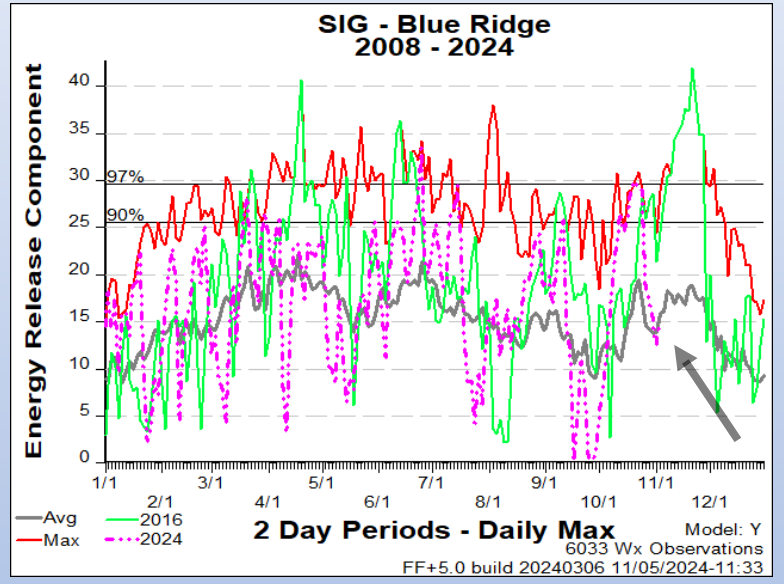
FDRA – Blue Ridge Escarpment



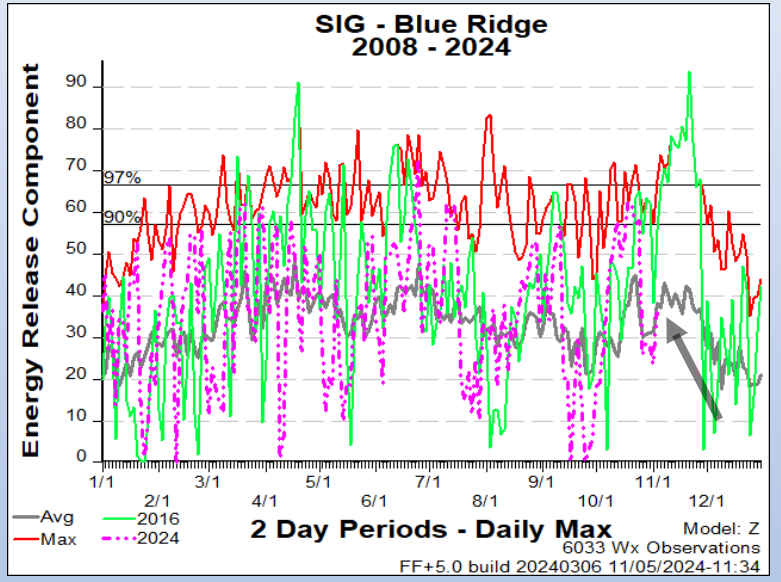
ERC-X



ERC-Y



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

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Average, Max, CY Year 2016 are displayed along with Year-to-Date 2024

Weekly Outlook

Blue Ridge Escarpment 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 05-Nov	WED 06-Nov	THU 07-Nov	FRI 08-Nov	SAT 09-Nov	SUN 10-Nov	MON 11-Nov
Avg. Max. Temp. (°F)	60	72	74	72	66	68	72
Avg. Min. Humidity (%)	92	78	71	69	69	70	62
Avg. 20' Wind Speed (mph)	2	2	2	2	3	3	3
Avg. Wind Direction*	SE	S	SSE	ENE	ENE	SSE	W
Avg. Probability of Precip. (%)	74	42	29	29	40	38	30
Days Since a Wetting Rain**	0.7	0.0	0.7	1.7			
Forecast ERC (Fuel Model X)	9.4	5.3	11.3	15.7	24.4	22.9	26.9
Forecast BI (Fuel Model X)	27.6	18.1	33.5	43.8	66.4	65.5	71.5
Forecast IC (Fuel Model X)	0.5	0.3	1.0	1.3	2.2	2.0	2.7
Forecast 100-Hr. FMC	21.1	22.5	23.7	24.2	24.2	24.0	23.6
Forecast 1000-Hr. FMC	21.2	21.4	21.8	22.4	22.9	23.2	23.3
KBDI	352.0						

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

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

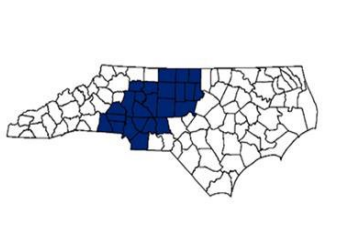
Values in the table above are averages from 3 stations in this FDRA:

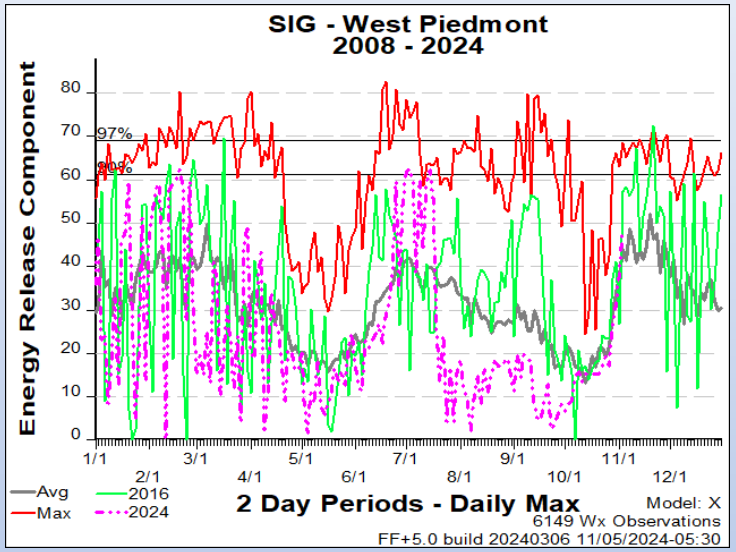
- **Rendezvous Mtn.** (312001)
- **North Cove Pinnacle (fr1)** (314301)
- **Rutherford County** (316302)

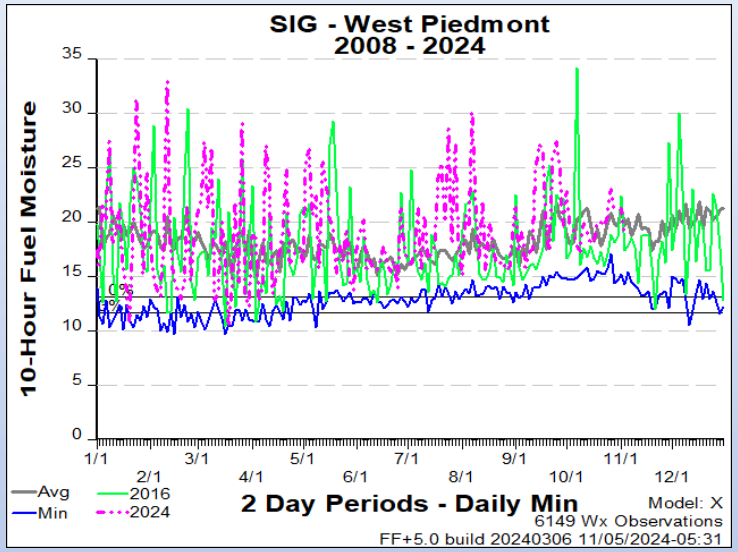
KEY	Low to Moderate Burning Conditions	Burning Conditions Can be High CAUTION	Burning Conditions Can be Critical WATCH OUT!
Avg. Max. Temp.	Less than 40°F	Between 40°F and 50°F	Greater than 50°F
Avg. Min. Humidity	Greater than 35%	Between 30% and 35%	Less than 30%
Avg. 20' Wind Speed	Less than 2 mph	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

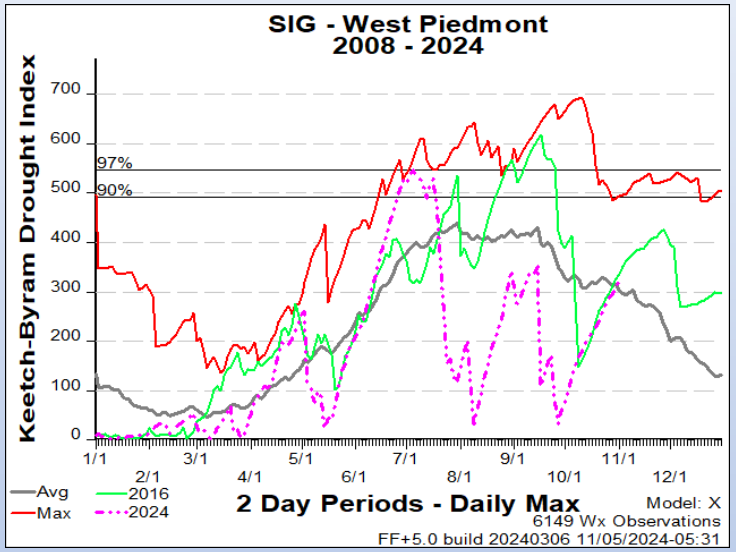
Other factors to consider when determining fire danger: **sky conditions**, **precipitation amount**, **number of days since rain**, and **season**

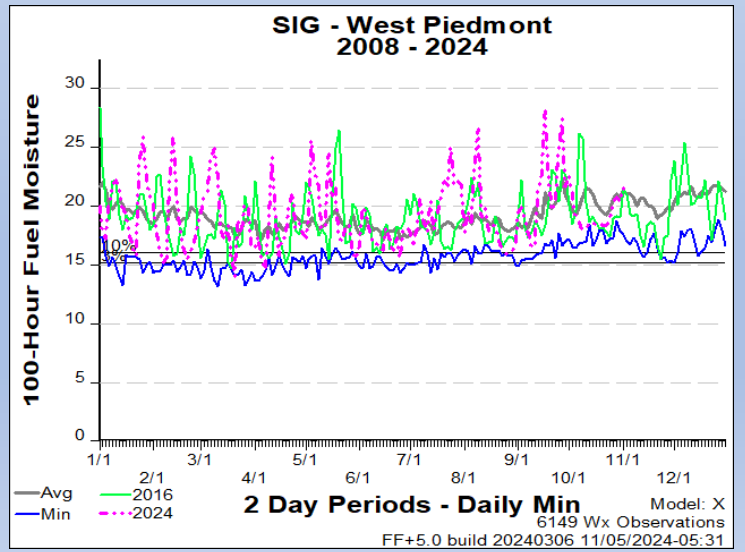
FDRA – Western Piedmont

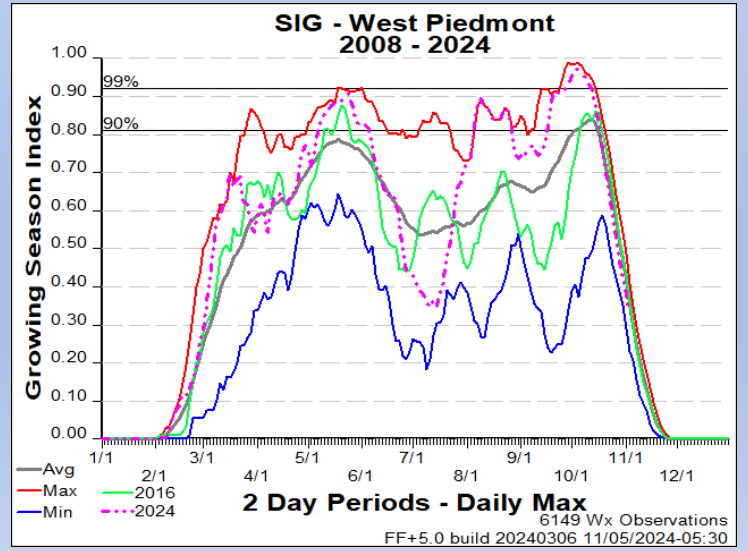


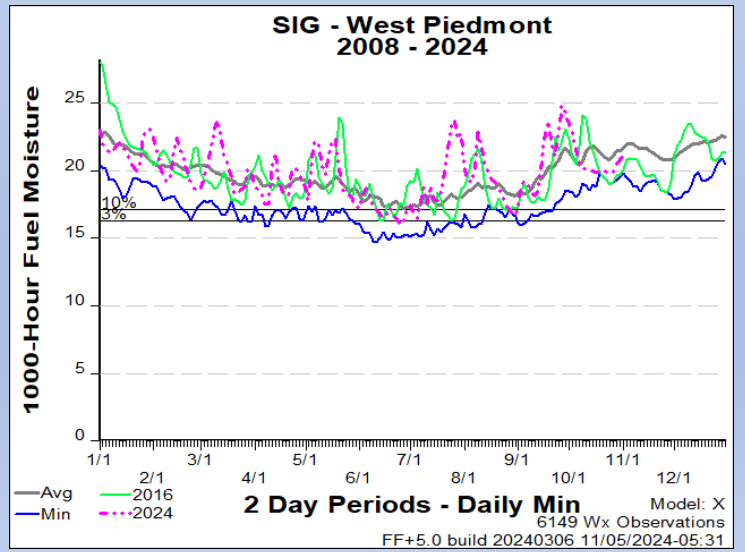




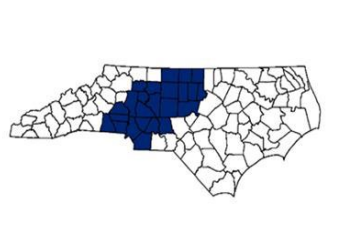




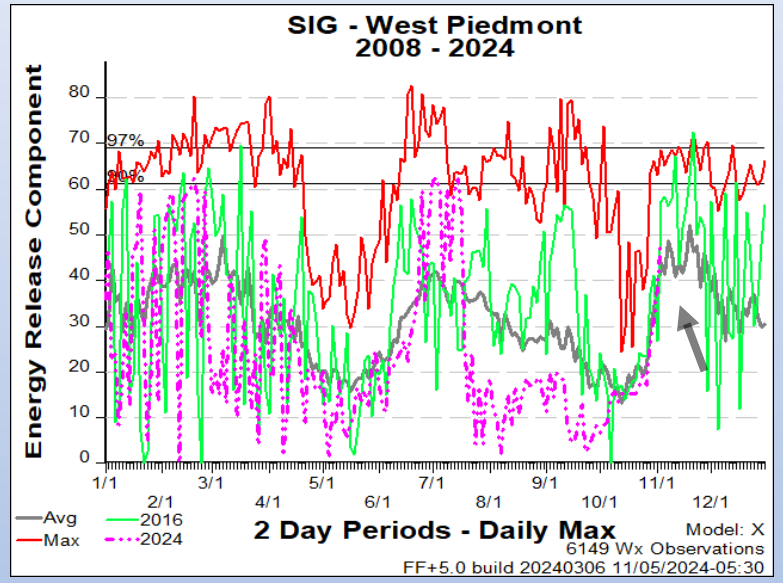




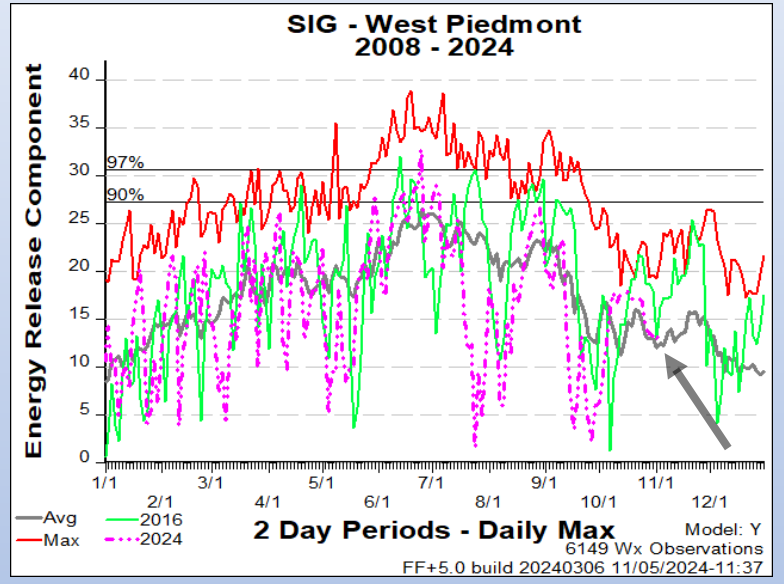
FDRA – Western Piedmont



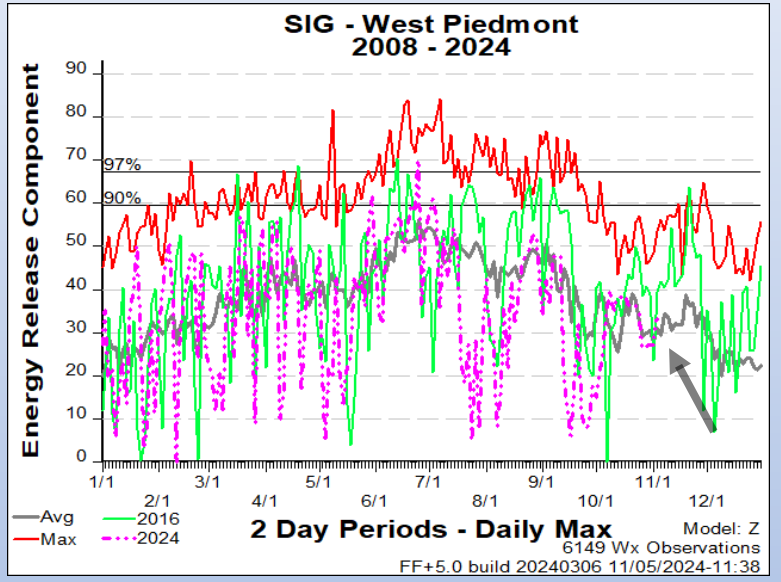
ERC-X



ERC-Y



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

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Average, Max, CY Year 2016 are displayed along with Year-to-Date 2024

Weekly Outlook

Western Piedmont 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 05-Nov	WED 06-Nov	THU 07-Nov	FRI 08-Nov	SAT 09-Nov	SUN 10-Nov	MON 11-Nov
Avg. Max. Temp. (°F)	73	77	76	73	69	71	74
Avg. Min. Humidity (%)	75	73	77	72	72	78	66
Avg. 20' Wind Speed (mph)	4	3	2	3	4	3	4
Avg. Wind Direction*	SE	S	S	NE	ENE	SSE	WSW
Avg. Probability of Precip. (%)	36	45	31	22	30	25	18
Days Since a Wetting Rain**	7.0	3.7	0.0	1.0			
Forecast ERC (Fuel Model X)	27.2	22.5	13.4	17.6	22.8	21.3	22.6
Forecast BI (Fuel Model X)	68.4	56.7	34.8	46.4	59.1	53.4	57.3
Forecast IC (Fuel Model X)	2.4	1.9	0.9	1.2	1.8	1.5	1.7
Forecast 100-Hr. FMC	20.8	21.4	22.1	22.6	22.8	22.9	22.9
Forecast 1000-Hr. FMC	22.4	22.4	22.4	22.5	22.5	22.6	22.7
KBDI	330.7						

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

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

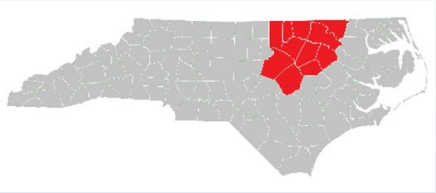
Values in the table above are averages from 3 stations in this FDRA:

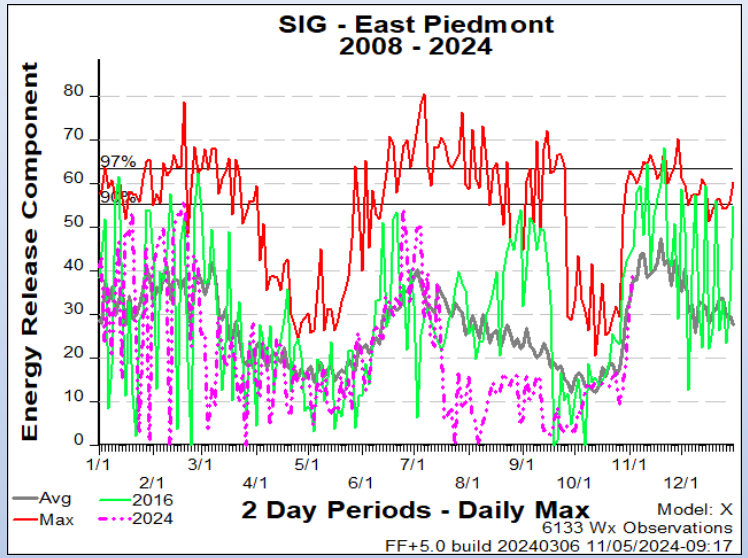
- **Duke Forest** (312501)
- **Lexington** (314602)
- **Mt. Island Lake** (316602)

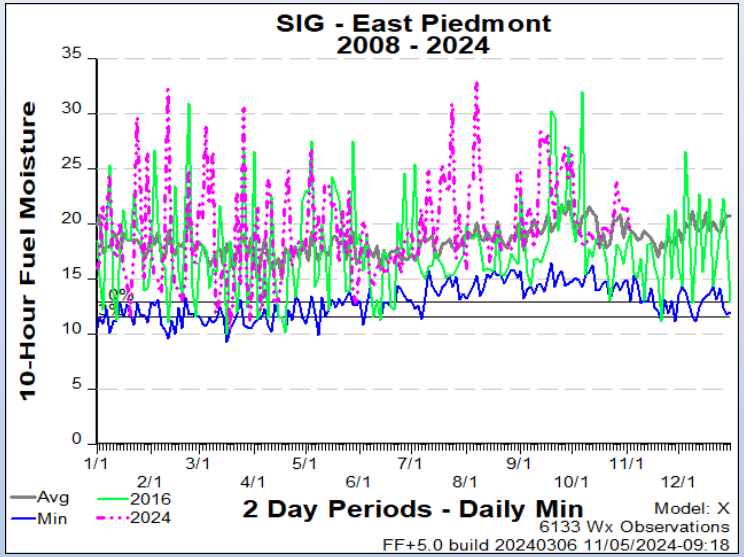
KEY	Low to Moderate Burning Conditions	Burning Conditions Can be High CAUTION	Burning Conditions Can be Critical WATCH OUT!
Avg. Max. Temp.	Less than 40°F	Between 40°F and 50°F	Greater than 50°F
Avg. Min. Humidity	Greater than 35%	Between 30% and 35%	Less than 30%
Avg. 20' Wind Speed	Less than 2 mph	Between 2 mph and 4 mph	Greater than 4 mph
Avg. Wind Direction*	Criticality of wind 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 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

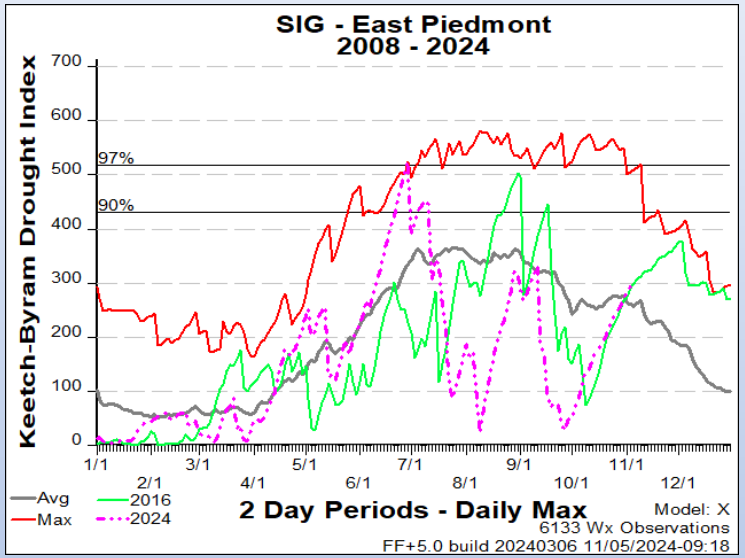
Other factors to consider when determining fire danger: **sky conditions**, **precipitation amount**, **number of days since rain**, and **season**

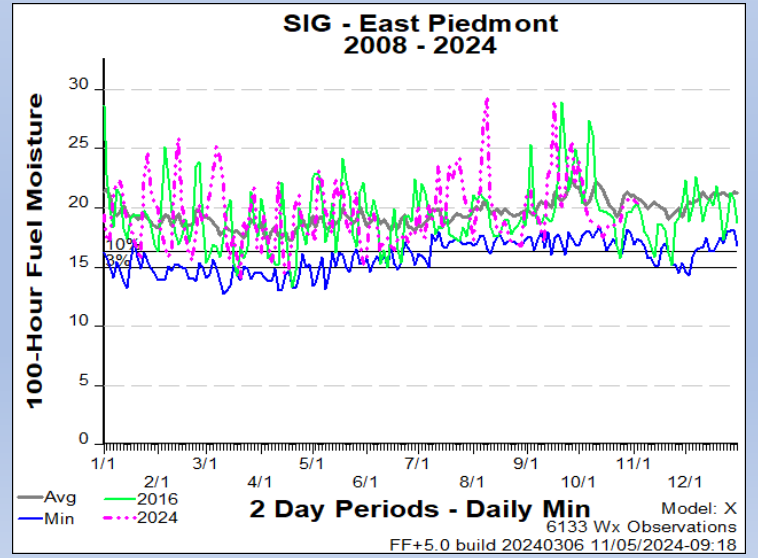
FDRA – Eastern Piedmont

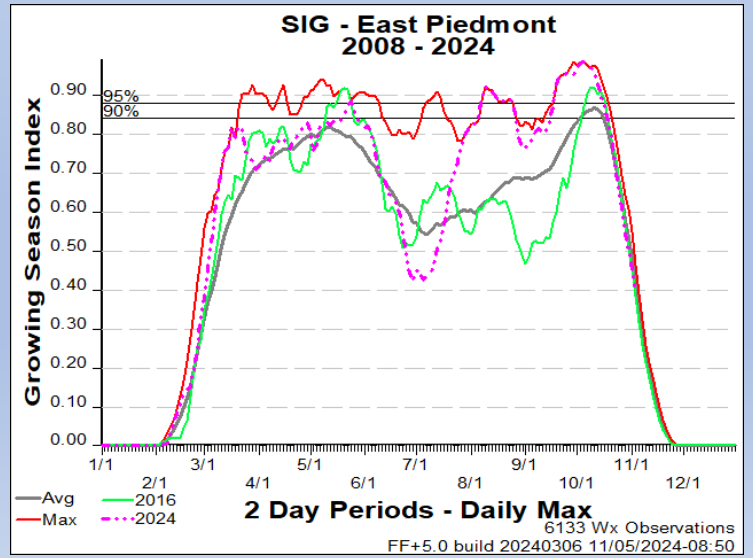


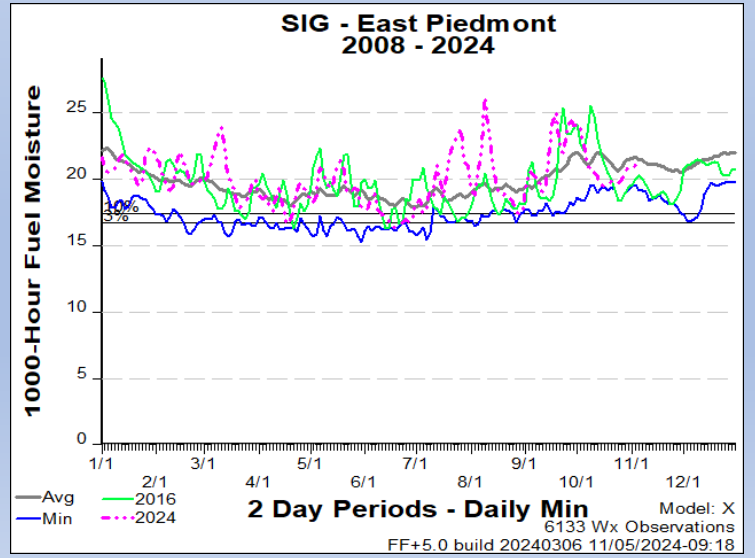












Weekly Outlook

Eastern Piedmont 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 05-Nov	WED 06-Nov	THU 07-Nov	FRI 08-Nov	SAT 09-Nov	SUN 10-Nov	MON 11-Nov
Avg. Max. Temp. (°F)	79	81	78	75	70	74	76
Avg. Min. Humidity (%)	54	58	74	66	64	71	64
Avg. 20' Wind Speed (mph)	5	4	2	3	4	3	4
Avg. Wind Direction*	SSE	SSW	SSW	NE	NE	SSE	WSW
Avg. Probability of Precip. (%)	3	39	32	17	25	25	20
Days Since a Wetting Rain**	1.0	2.0	0.8	1.8			
Forecast ERC (Fuel Model X)	33.2	34.0	24.7	23.9	29.3	29.1	23.9
Forecast BI (Fuel Model X)	84.2	73.7	51.4	56.3	64.9	65.9	63.4
Forecast IC (Fuel Model X)	4.7	4.1	2.0	2.1	2.8	3.0	2.4
Forecast 100-Hr. FMC	20.4	20.4	20.7	21.1	21.2	21.2	21.2
Forecast 1000-Hr. FMC	22.3	22.3	22.3	22.3	22.3	22.3	22.3
KBDI	295.8						

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

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

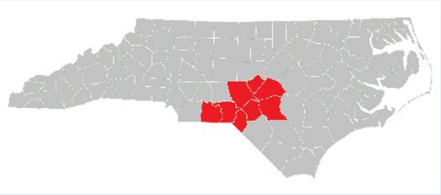
Values in the table above are averages from 4 stations in this FDRA:

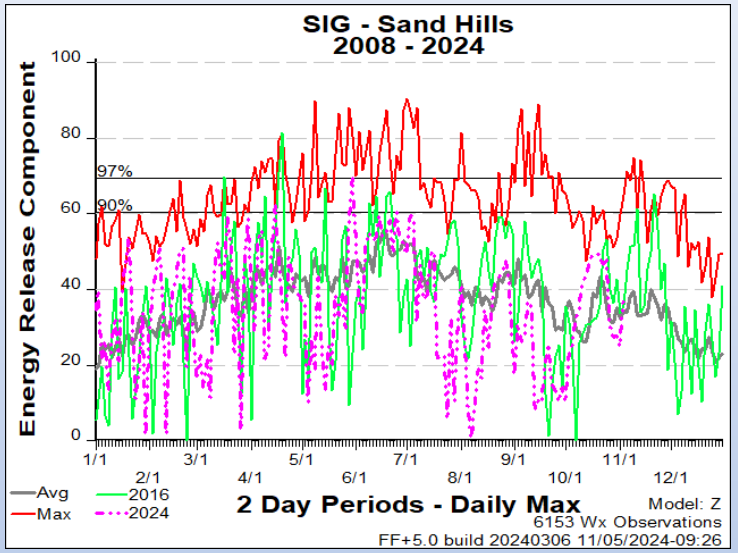
- **Oxford Tobacco Research Stn** (310841)
- **Upper Coastal Plain Res Stn** (312940)
- **Lake Wheeler Rd Field Lab** (314941)
- **Central Crops Research Station** (317441)

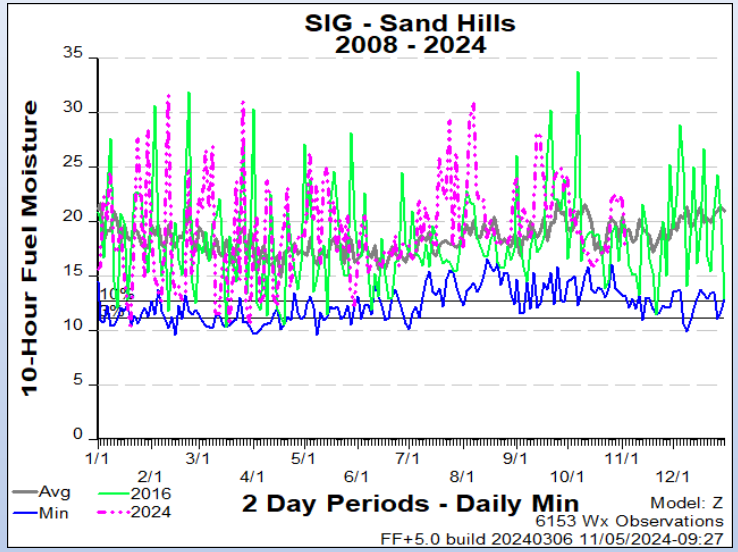
KEY	Low to Moderate Burning Conditions	Burning Conditions Can be High CAUTION	Burning Conditions Can be Critical WATCH OUT!
Avg. Max. Temp.	Less than 50°F	Between 50°F and 60°F	Greater than 60°F
Avg. Min. Humidity	Greater than 40%	Between 35% and 40%	Less than 35%
Avg. 20' Wind Speed	Less than 10 mph	Between 10 mph and 15 mph	Greater than 15 mph
Avg. Wind Direction*	Criticality of wind 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 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

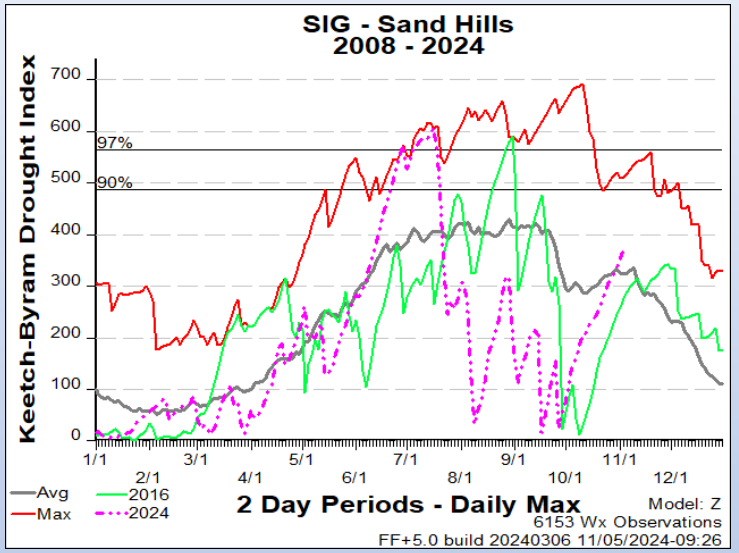
Other factors to consider when determining fire danger: **sky conditions**, **precipitation amount**, **number of days since rain**, and **season**

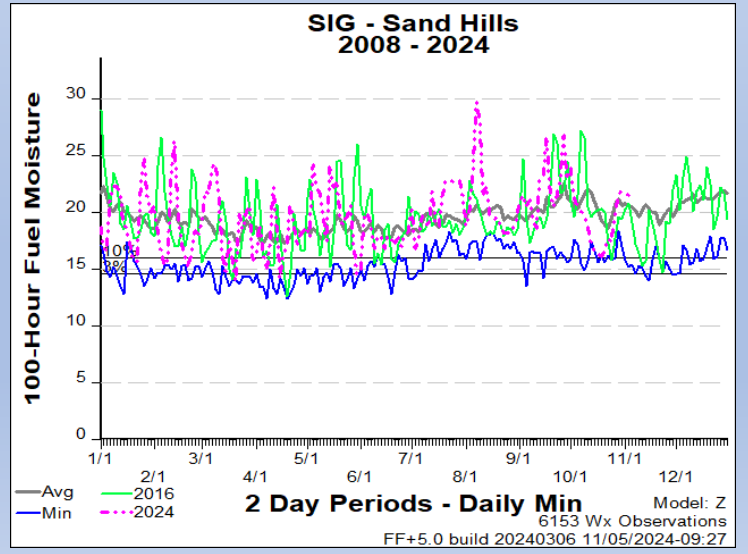
FDRA – Sandhills

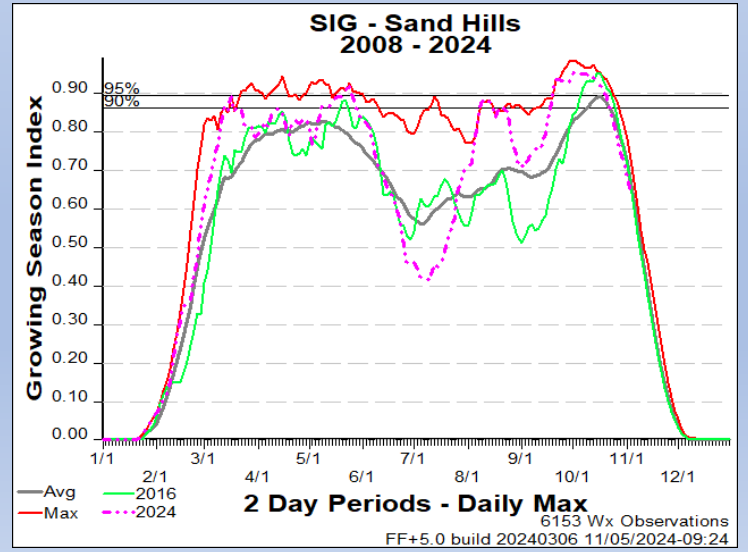


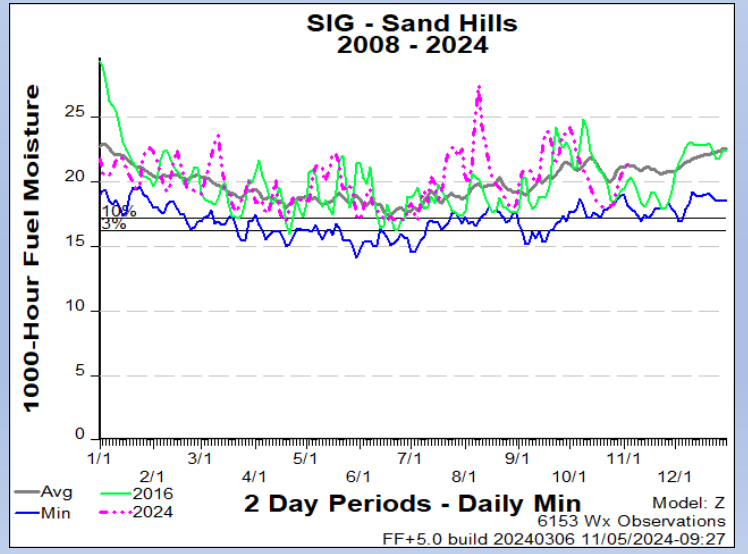












Weekly Outlook

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 05-Nov	WED 06-Nov	THU 07-Nov	FRI 08-Nov	SAT 09-Nov	SUN 10-Nov	MON 11-Nov
Avg. Max. Temp. (°F)	81	82	78	76	72	76	78
Avg. Min. Humidity (%)	55	59	71	66	59	66	57
Avg. 20' Wind Speed (mph)	6	3	2	3	4	3	3
Avg. Wind Direction*	SSE	S	SSE	NE	ENE	SE	WSW
Avg. Probability of Precip. (%)	13	52	40	21	24	20	15
Days Since a Wetting Rain**	16.3	12.7	0.0	1.0			
Forecast ERC (Fuel Model Z)	27.3	27.1	23.4	20.3	23.4	24.0	22.3
Forecast BI (Fuel Model Z)	32.0	25.3	20.8	22.4	25.9	25.7	24.9
Forecast IC (Fuel Model Z)	4.3	3.5	2.0	1.6	2.9	3.1	2.6
Forecast 100-Hr. FMC	20.8	21.0	21.4	22.0	22.1	22.0	22.0
Forecast 1000-Hr. FMC	21.3	21.4	21.4	21.5	21.5	21.7	21.8
KBDI	358.0						

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

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

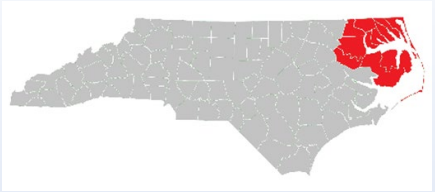
Values in the table above are averages from 3 stations in this FDRA:

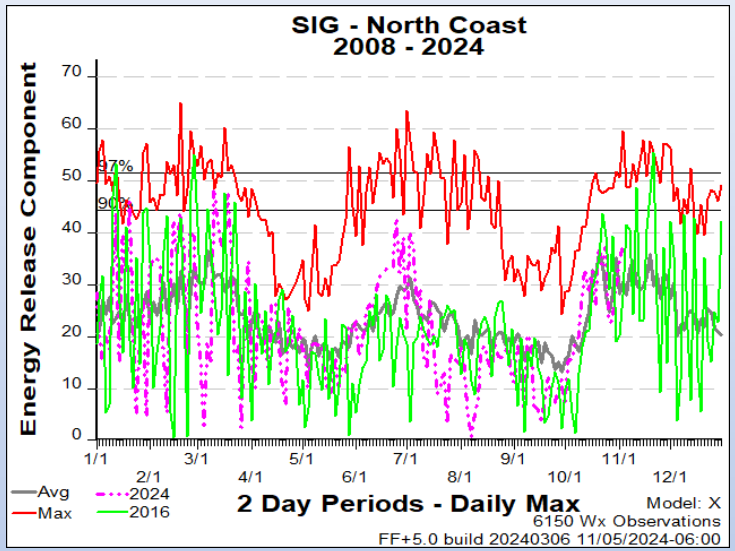
- **Sandhills Research Station** (317040)
- **Rockingham** (318202)
- **Fort Liberty** (318503)

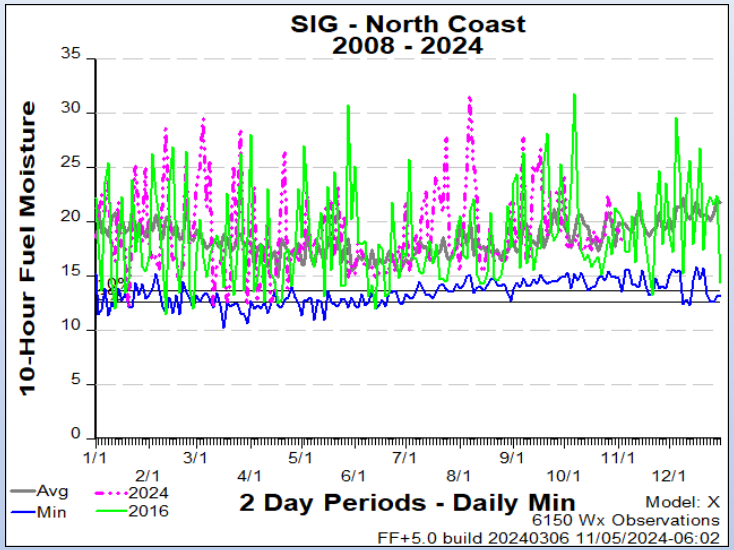
KEY	Low to Moderate Burning Conditions	Burning Conditions Can be High CAUTION	Burning Conditions Can be Critical WATCH OUT!
Avg. Max. Temp.	Less than 50°F	Between 50°F and 60°F	Greater than 60°F
Avg. Min. Humidity	Greater than 40%	Between 30% and 40%	Less than 30%
Avg. 20' Wind Speed	Less than 4 mph	Between 4 mph and 8 mph	Greater than 8 mph
Avg. Wind Direction*	Criticality of wind direction is highly dependent on burn 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 52.4	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

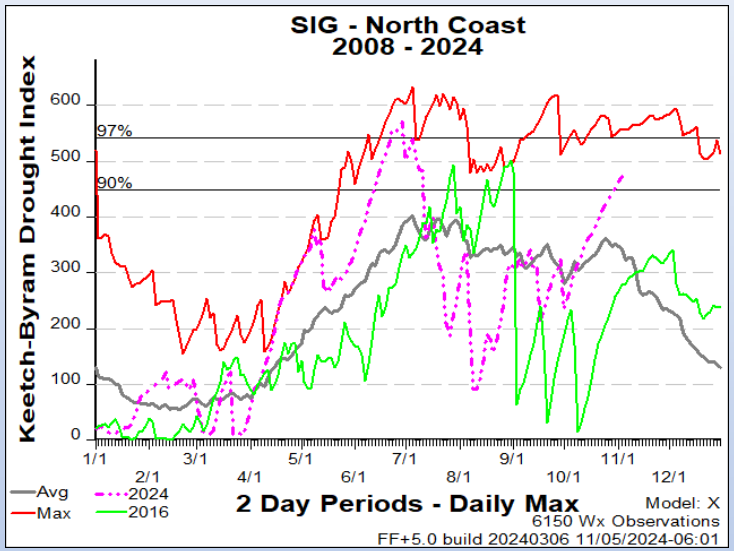
Other factors to consider when determining fire danger: **sky conditions**, **precipitation amount**, **number of days since rain**, and **season**

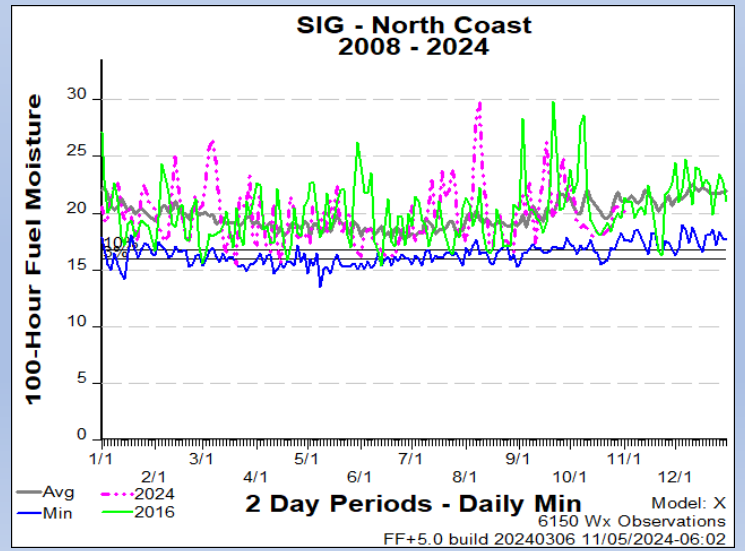
FDRA – North Coast

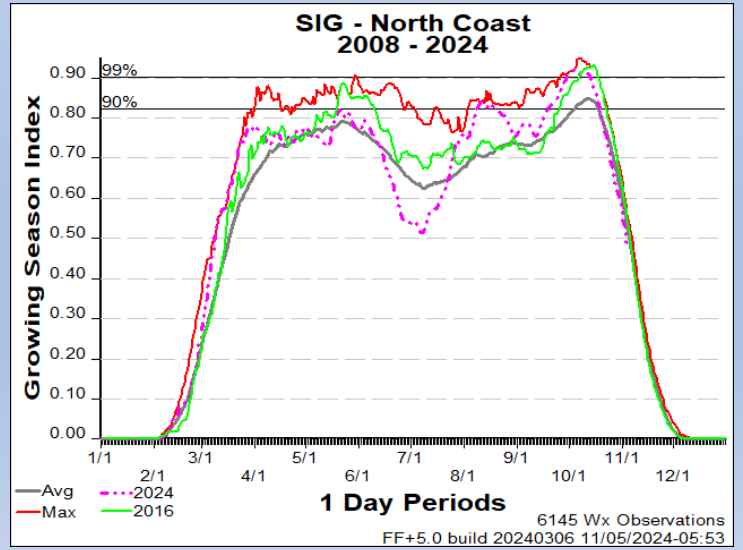


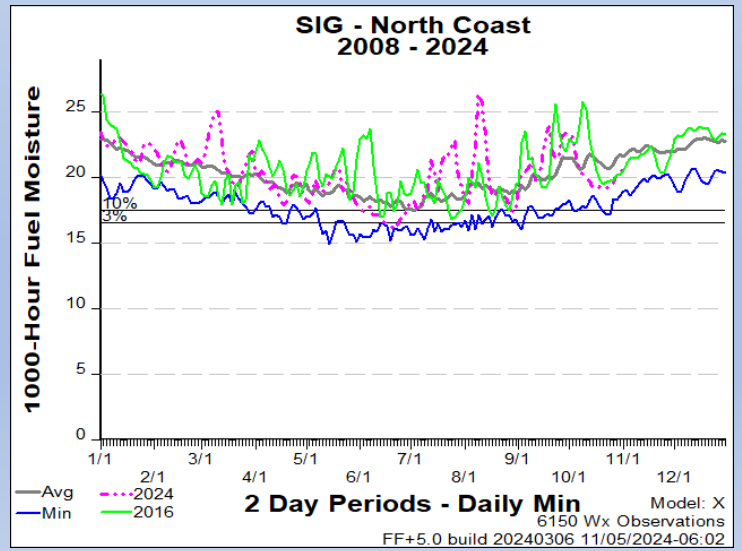




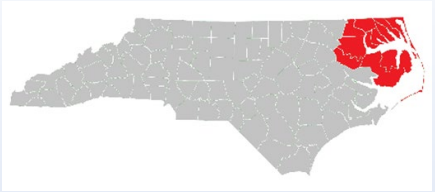




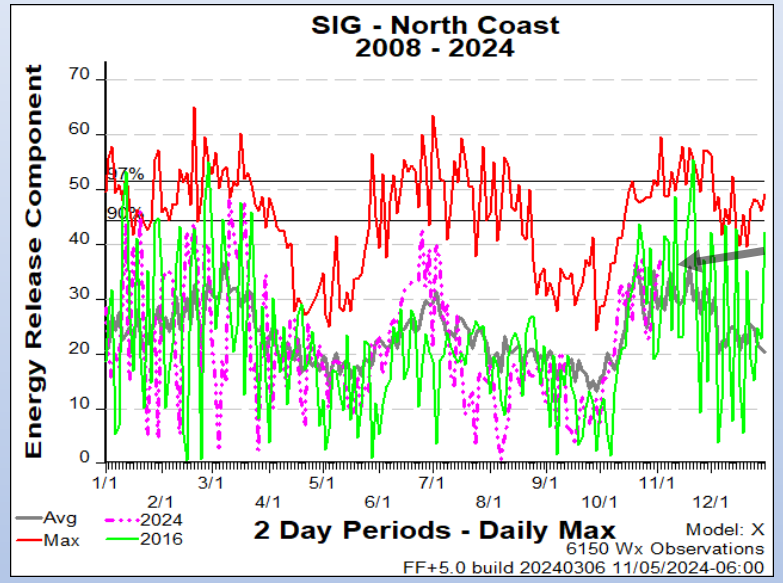




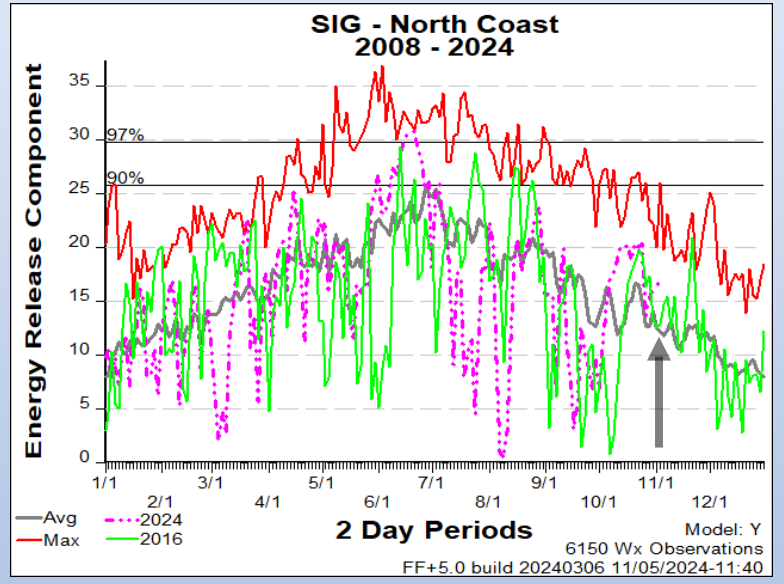
FDRA – North Coast



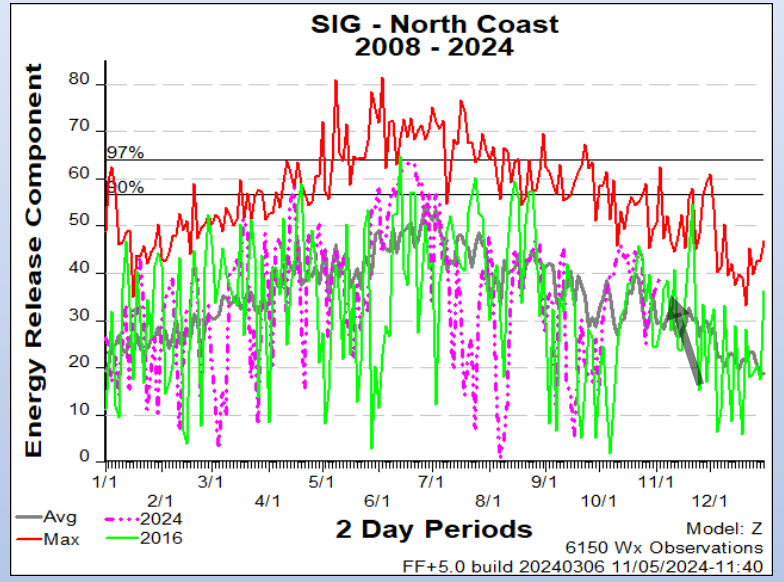
ERC-X



ERC-Y



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

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Average, Max, CY Year 2016 are displayed along with Year-to-Date 2024

Weekly Outlook

Northern 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 05-Nov	WED 06-Nov	THU 07-Nov	FRI 08-Nov	SAT 09-Nov	SUN 10-Nov	MON 11-Nov
Avg. Max. Temp. (°F)	78	82	78	76	71	76	77
Avg. Min. Humidity (%)	57	57	70	60	60	65	62
Avg. 20' Wind Speed (mph)	6	4	3	4	5	4	5
Avg. Wind Direction*	SSE	S	SW	ENE	ENE	SE	WSW
Avg. Probability of Precip. (%)	2	18	27	13	19	30	23
Days Since a Wetting Rain**	23.3	24.3	22.3	23.3			
Forecast ERC (Fuel Model X)	24.6	27.0	22.7	22.4	27.4	26.2	20.6
Forecast BI (Fuel Model X)	66.0	60.7	44.2	50.0	67.5	60.8	49.4
Forecast IC (Fuel Model X)	4.2	3.9	2.1	2.3	3.7	3.2	2.2
Forecast 100-Hr. FMC	20.1	20.2	20.6	20.9	20.9	20.8	20.9
Forecast 1000-Hr. FMC	21.7	21.7	21.7	21.7	21.7	21.7	21.7
KBDI	474.8						

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

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

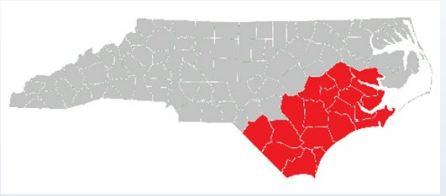
Values in the table above are averages from 4 stations in this FDRA:

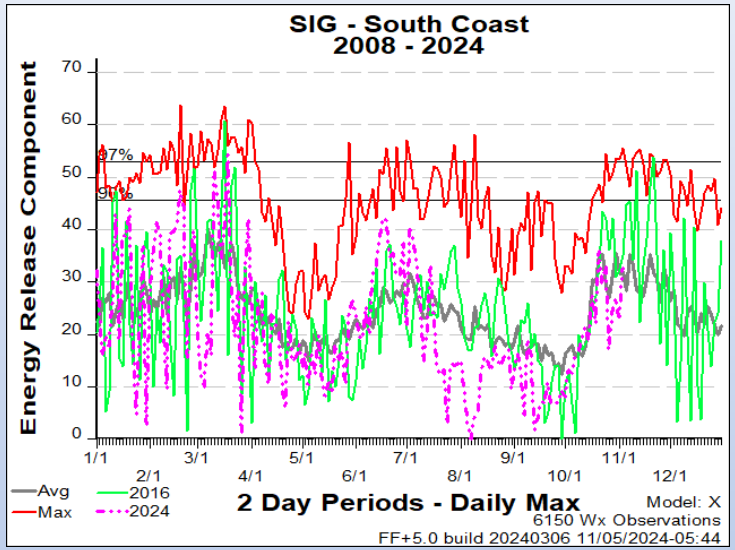
- **Elizabeth City** (311503)
- **Greens Cross** (313001)
- **Pocosin Lakes** (315201)
- **Fairfield** (317901)

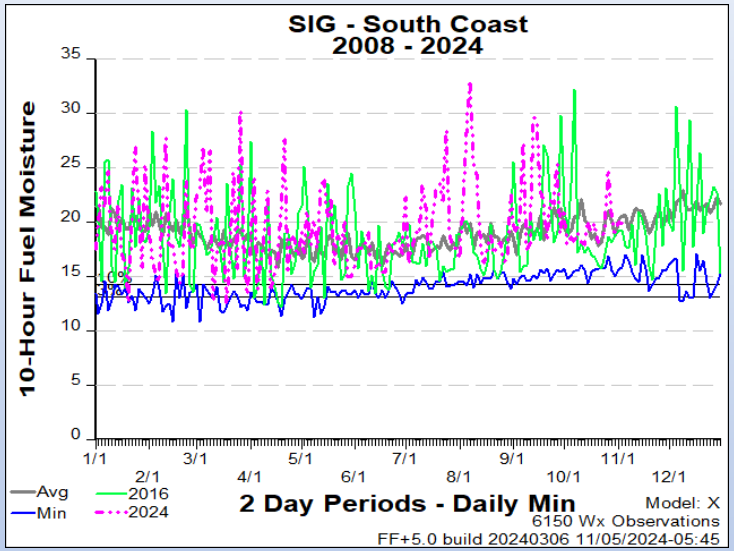
KEY	Low to Moderate Burning Conditions	Burning Conditions Can be High CAUTION	Burning Conditions Can be Critical WATCH OUT!
Avg. Max. Temp.	Less than 45°F	Between 45°F and 55°F	Greater than 55°F
Avg. Min. Humidity	Greater than 40%	Between 35% and 40%	Less than 35%
Avg. 20' Wind Speed	Less than 10 mph	Between 10 mph and 15 mph	Greater than 15 mph
Avg. Wind Direction*	Criticality of wind 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 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

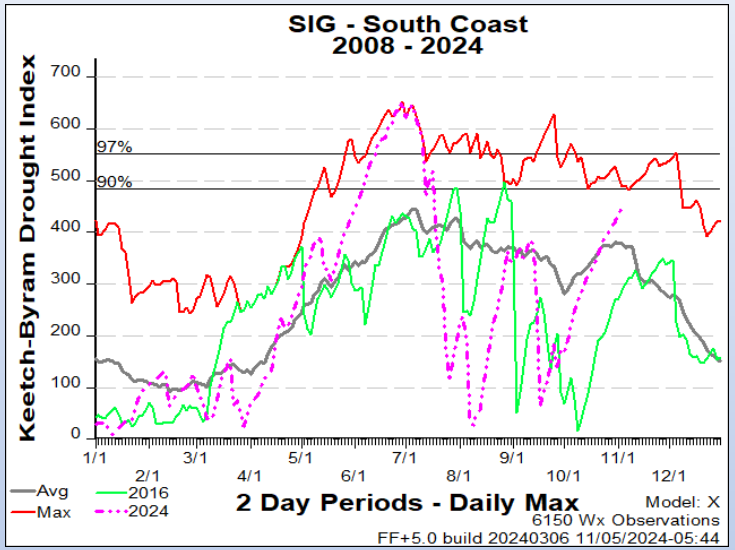
Other factors to consider when determining fire danger: **sky conditions, precipitation amount, number of days since rain,** and **season**

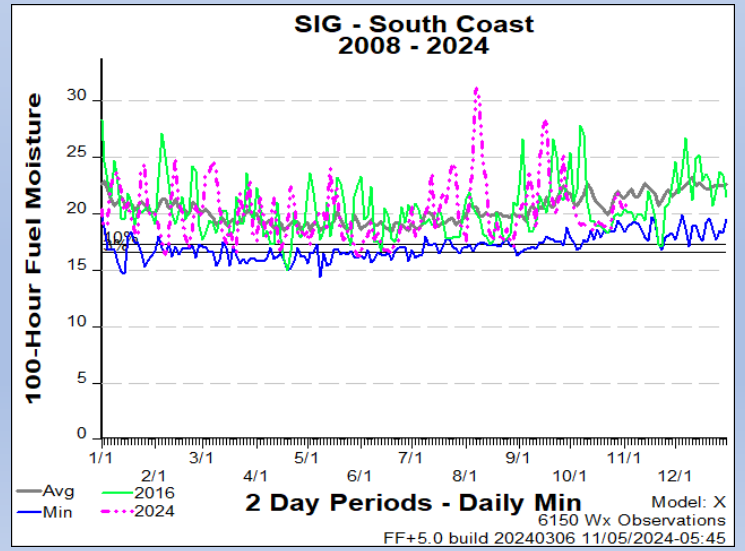
FDRA – South Coast

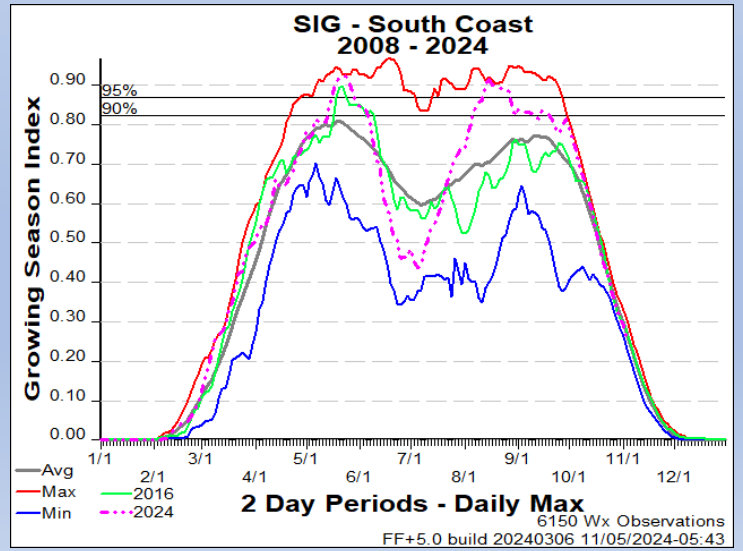


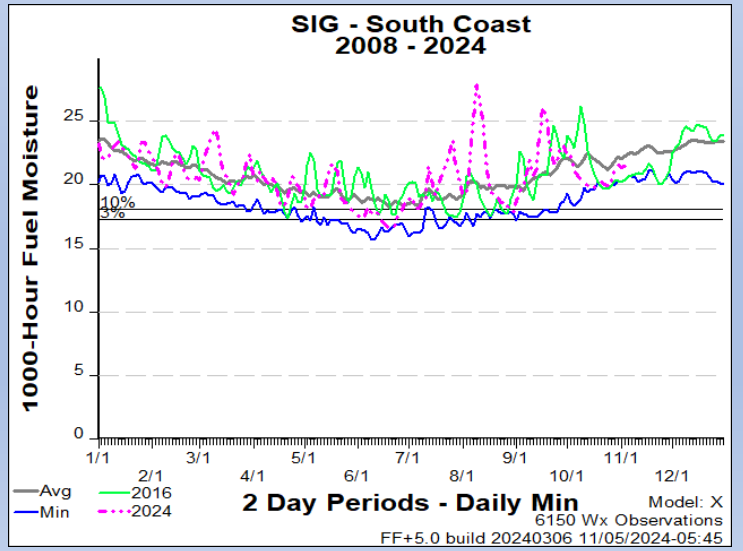












Weekly Outlook

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 05-Nov	WED 06-Nov	THU 07-Nov	FRI 08-Nov	SAT 09-Nov	SUN 10-Nov	MON 11-Nov
Avg. Max. Temp. (°F)	80	83	78	77	74	78	78
Avg. Min. Humidity (%)	55	59	78	69	61	66	63
Avg. 20' Wind Speed (mph)	4	3	2	3	4	4	4
Avg. Wind Direction*	SE	SSE	SSE	NE	ENE	SE	SW
Avg. Probability of Precip. (%)	3	33	44	18	17	23	20
Days Since a Wetting Rain**	18.6	19.6	0.0	1.0			
Forecast ERC (Fuel Model X)	17.6	18.5	15.6	13.6	19.6	22.5	18.8
Forecast BI (Fuel Model X)	38.2	34.2	26.8	28.1	45.6	52.5	45.5
Forecast IC (Fuel Model X)	2.8	2.5	1.5	1.2	2.5	3.0	2.3
Forecast 100-Hr. FMC	21.6	21.5	21.6	22.1	22.1	22.1	22.0
Forecast 1000-Hr. FMC	22.5	22.5	22.6	22.6	22.6	22.6	22.7
KBDI	447.9						

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

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

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)

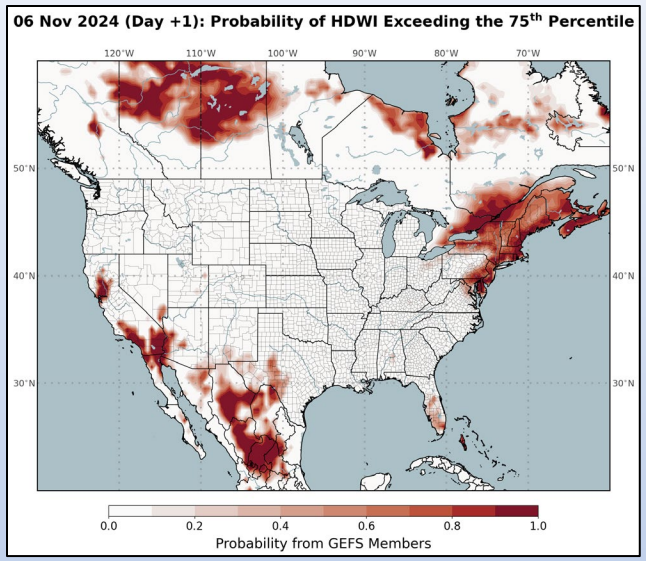
KEY	Low to Moderate Burning Conditions	Burning Conditions Can be High CAUTION	Burning Conditions Can be Critical WATCH OUT!
Avg. Max. Temp.	Less than 50°F	Between 50°F and 65°F	Greater than 65°F
Avg. Min. Humidity	Greater than 40%	Between 35% and 40%	Less than 35%
Avg. 20' Wind Speed	Less than 5 mph	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**

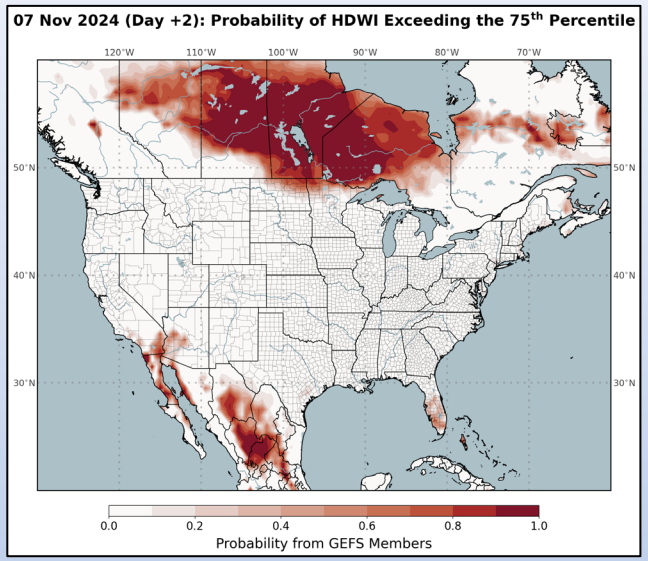
Statewide Slides

Hot-Dry-Windy Index (HDW)

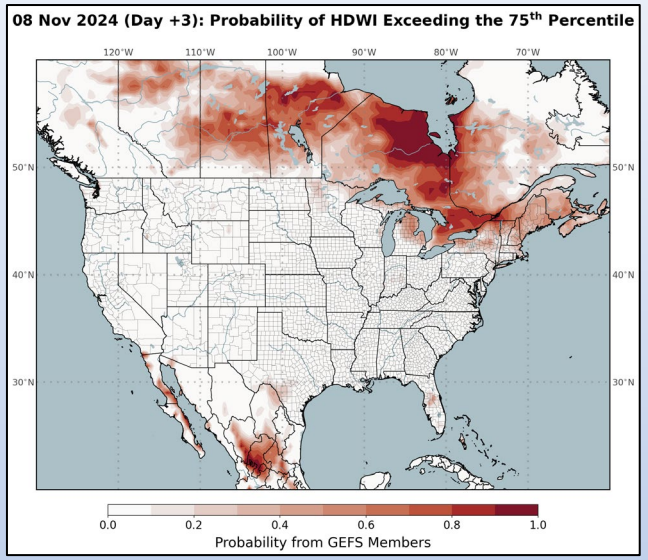
Wednesday > 75th Percentile



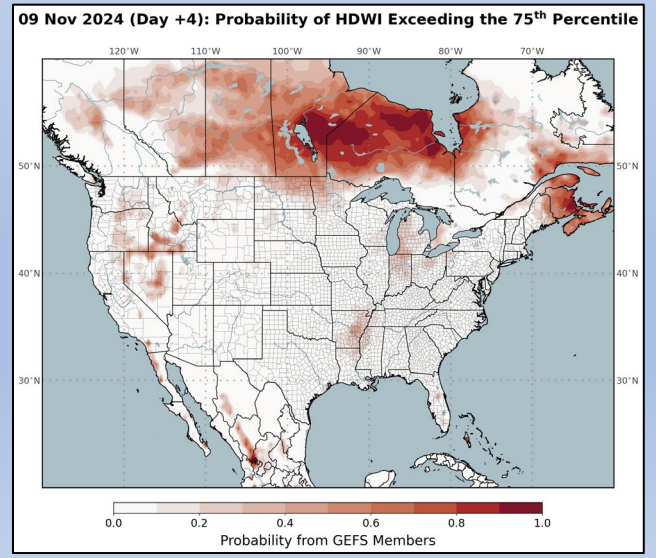
Thursday > 75th Percentile



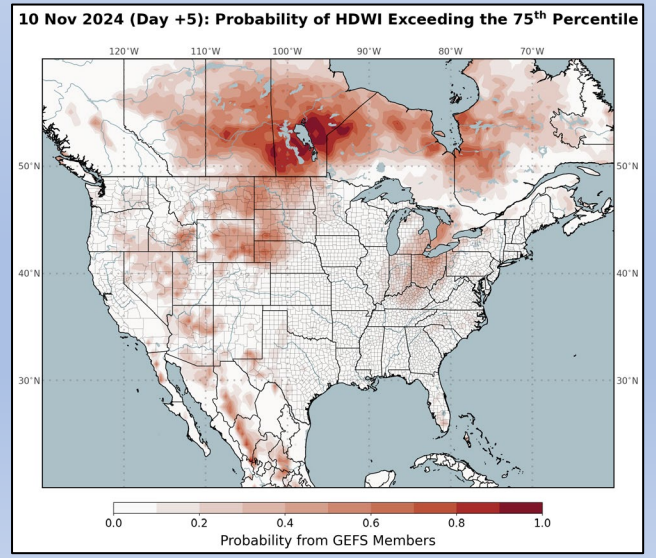
Friday > 75th Percentile



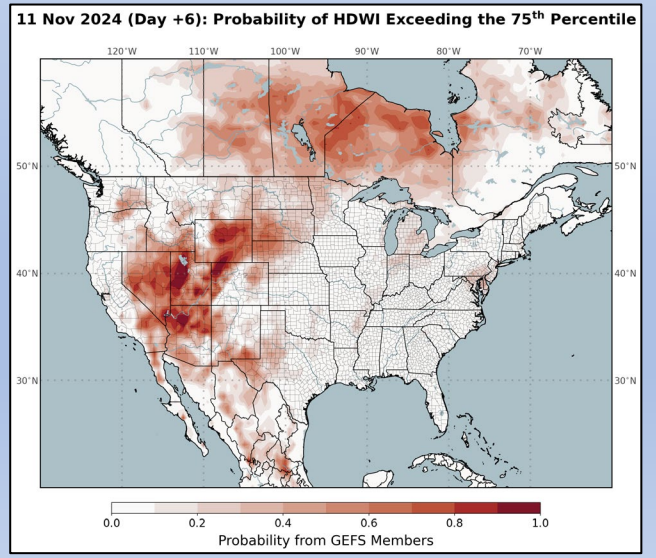
Saturday > 75th Percentile



Sunday > 75th Percentile



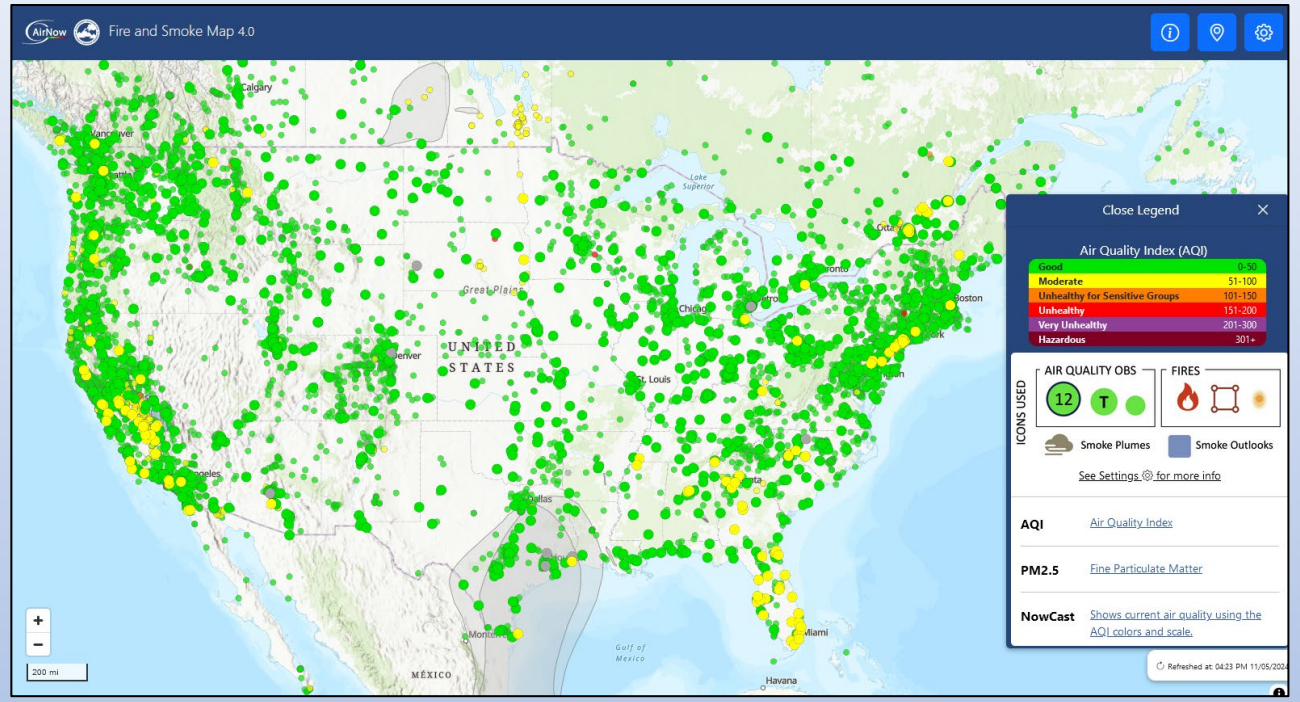
Monday > 75th Percentile



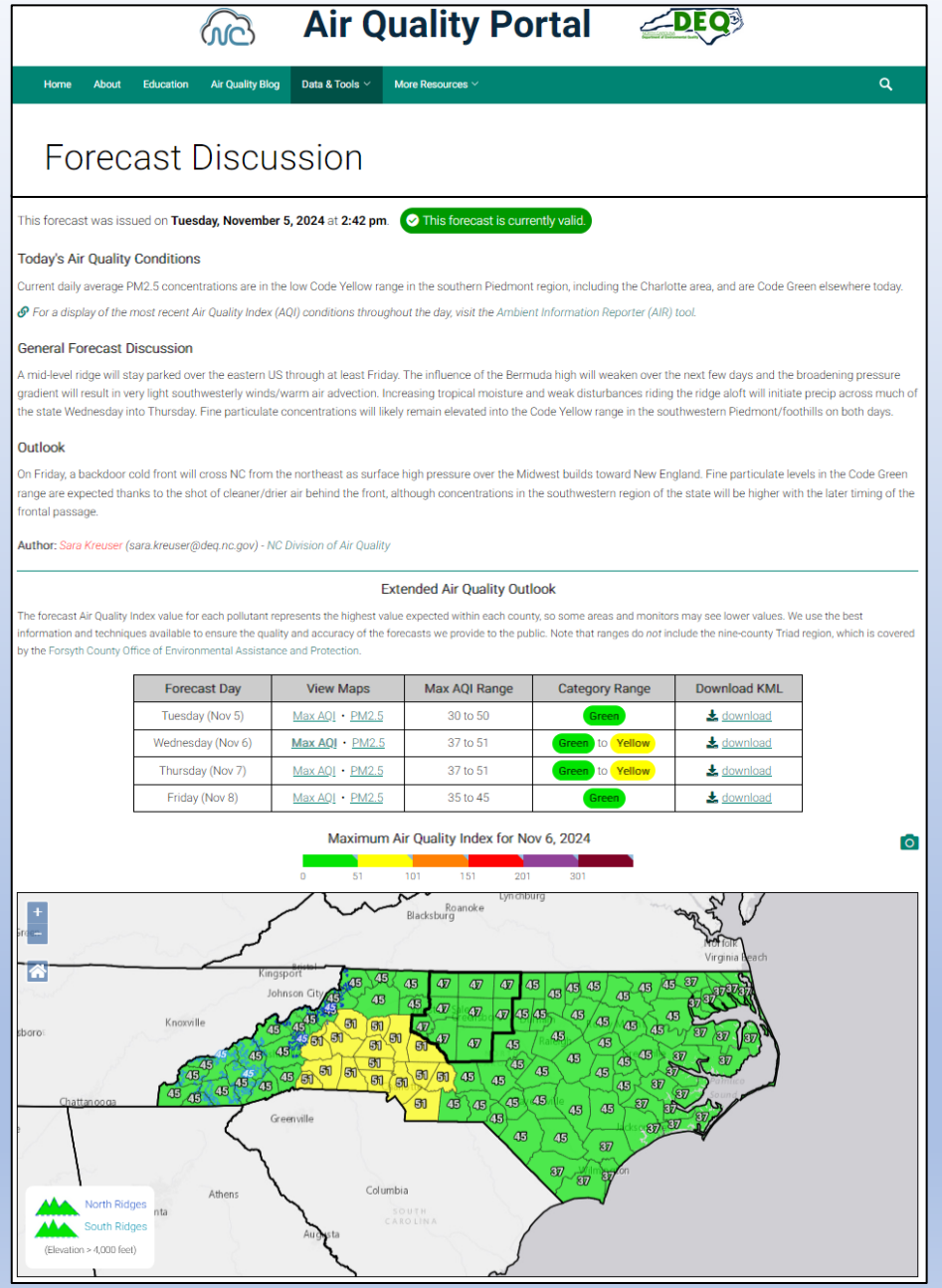
- Another visualization tool to pick up on broader weather, but with *limitations
- Only uses Max VPD (atmospheric moisture & temp) & Max Wind Speed to generate outputs
- Coarse Resolution - 0.5 Degree Grid
- **No Account of Local Fuel Conditions & Topo Influences**

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

Air Quality Notes



https://fire.airnow.gov/#



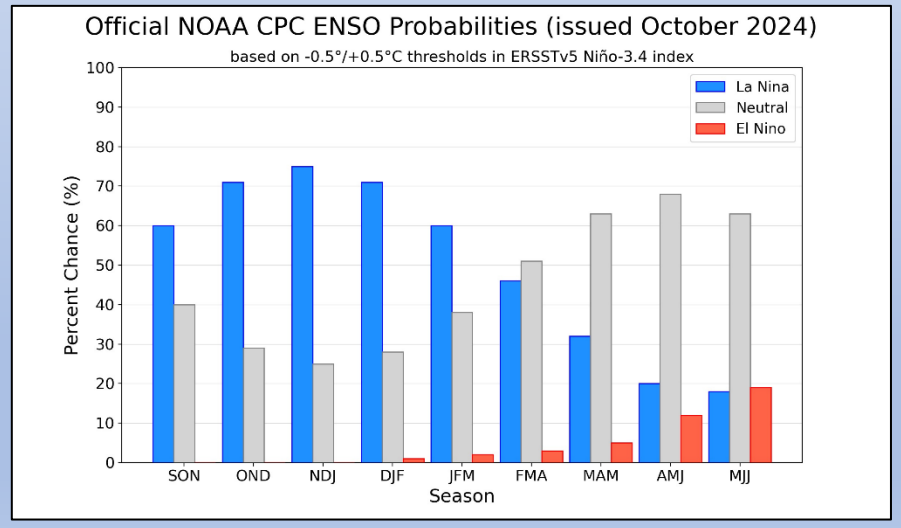
https://airquality.climate.ncsu.edu/discussion/?view=latest

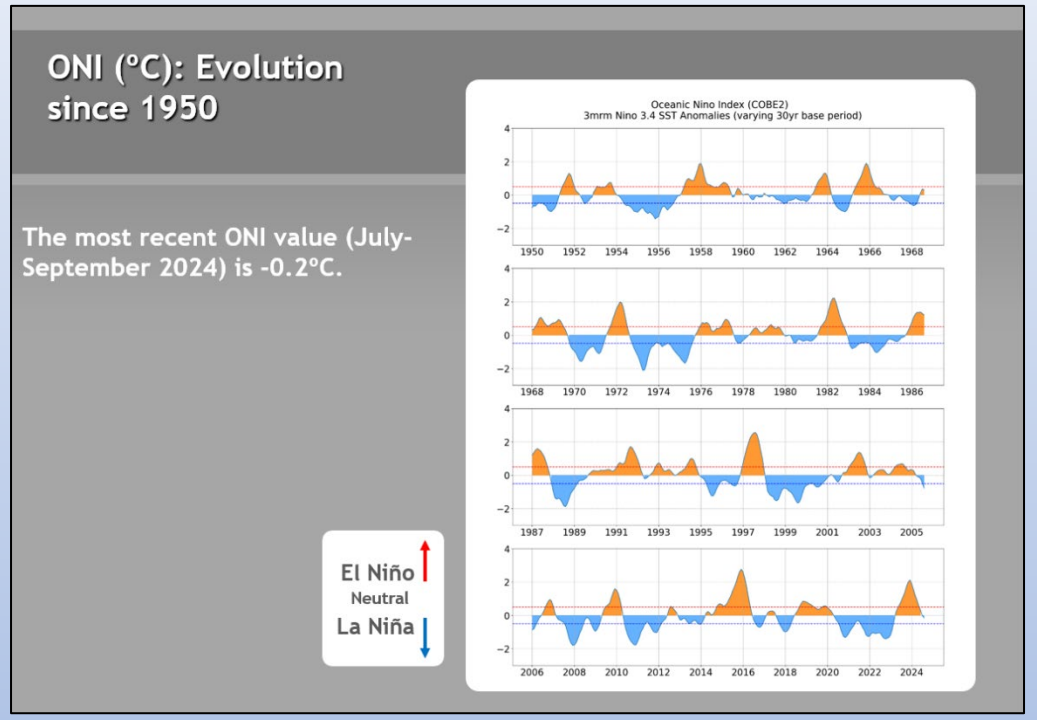
ENSO Notes from the CPC (10/10/24 Update)

ENSO Alert System Status: La Niña Watch

La Niña is favored to emerge in September-November (60% chance) and is expected to persist through January-March 2025.

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^{o} C (line shown in green) for 3 consecutive months. For El Nino, the departure must be at least 0.5^{o} C above average for 3 consecutive months.





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

[The IRI plume predicts a weak and a short duration La Niña, as indicated by the Niño-3.4 index values less than -0.5°C [Fig. 6]. The latest North American Multi-Model Ensemble (NMME) forecasts were warmer this month, but still predict a weak La Niña. As a result of the warmer predictions and the recent weakening of equatorial trade winds, the team still favors a weak event, but has lowered the chances of La Niña. A weaker La Niña implies that it 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 is favored to emerge in September-November (60% chance) and is expected to persist through January-March 2025 [Fig. 7].

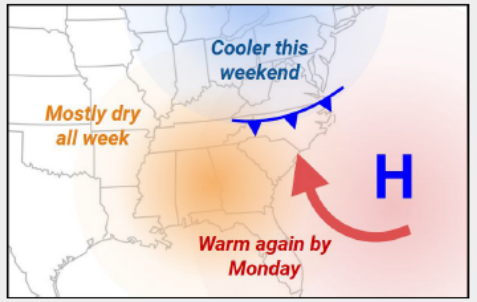
Slide Source: *https://www.cpc.ncep.noaa.gov/products/analysis_monitoring/lanina/enso_evolution-status-fcsts-web.ppt*

State Climate Office: Short-Range Monthly Outlook for NC

Released 10/31/24 & Location: https://climate.ncsu.edu/fire/outlooks/

Short-Range Outlook for North Carolina

Week 1: Oct. 31 to Nov. 6, 2024



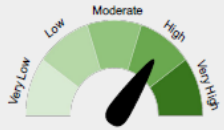
Quick Weekend Cooldown

After warm weather on Thursday and Friday, our temperatures will drop behind a cold front moving in from the north on Saturday morning, with weekend highs near 70°F. Offshore high pressure will then take control again, with a warm-up starting Monday.

Limited Rain Expected

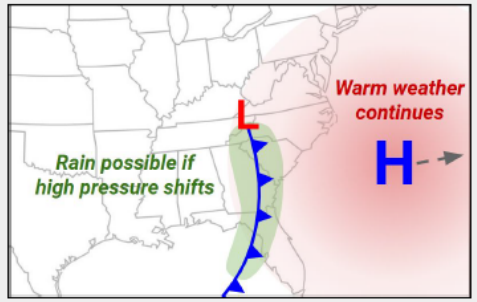
Our best chance of rain will likely come along the cold front late Friday and early Saturday, but any showers should be isolated with totals of less than 0.10". Better chances could come farther west on Friday, but totals will still be light in that region.

Forecast Confidence



Aside from the small rain chances on Friday and into early Saturday, this is set to be a quiet, mostly dry, and mostly warm week.

Week 2: November 7 to 13, 2024



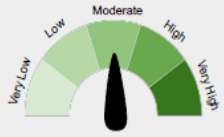
Staying Warm This Week

Lingering offshore high pressure should keep our temperatures above normal this week, in the 70s and perhaps near 80°F at times. That will also likely delay the first freeze of the season, putting it at least 2 to 3 weeks later than average for most western locales.

Mid-Week Rain Possible?

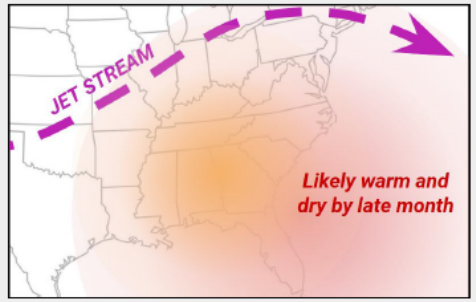
Current forecasts hint at one decent rain chance this week by Monday, Nov. 11 or Tuesday, Nov. 12. If high pressure shifts farther offshore, that may open the door for a cold front or coastal low pressure system to bring at least light rain across most of the state.

Forecast Confidence



More than 10 days out, confidence is lower about the potential rain event, but those details should come into focus later next week.

Weeks 3-4: November 14 to 27, 2024



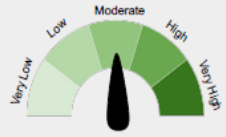
A Warm End to Fall

Current forecasts strongly favor a jet stream ridging pattern developing over the Southeast by mid-month, which should keep us mostly warmer than normal. Our average high temperatures in late November are in the upper 50s, with average lows in the upper 30s.

More Dry Weather

That jet stream ridging pattern should keep the storm track to our north and west, with mostly dry weather likely for North Carolina – a typical setup for a La Niña winter. Ongoing dryness with low humidity after leaf drop may mean high fire danger statewide.

Forecast Confidence



Although it's a ways off, longer-term models are in good agreement about the La Niña-like pattern setting up by later in November.

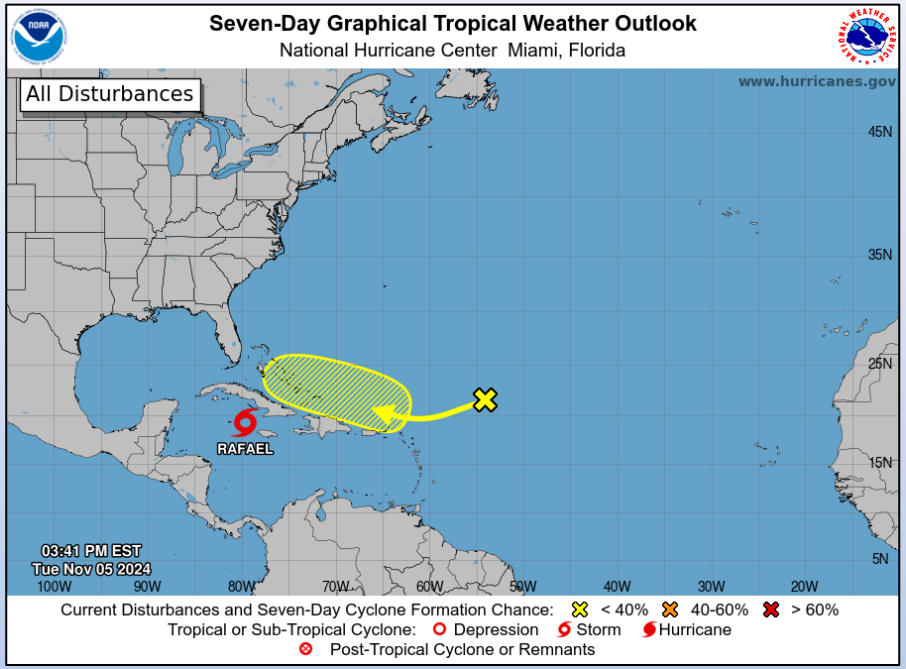
This infographic is based on forecast and outlook guidance from the National Weather Service. For more information, visit **www.weather.gov**.

Author: Corey Davis (NCSCO)
cndavis@ncsu.edu

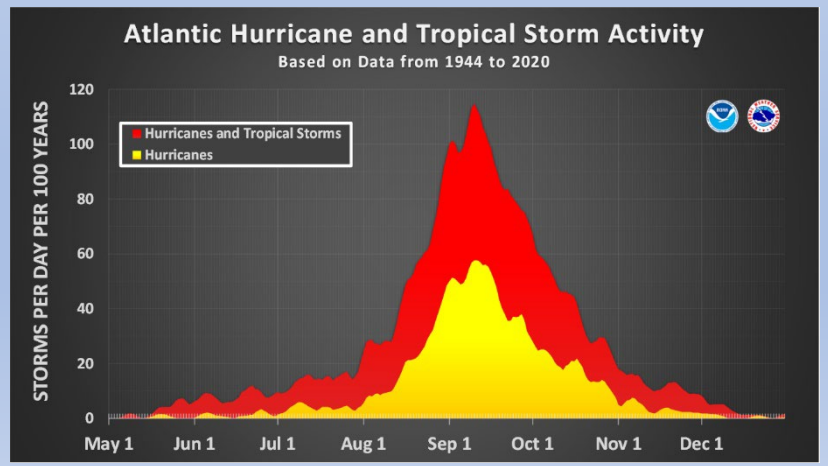
NORTH CAROLINA CLIMATE OFFICE

Supported by: NC Forest Service

7-Day Tropical Weather Outlook

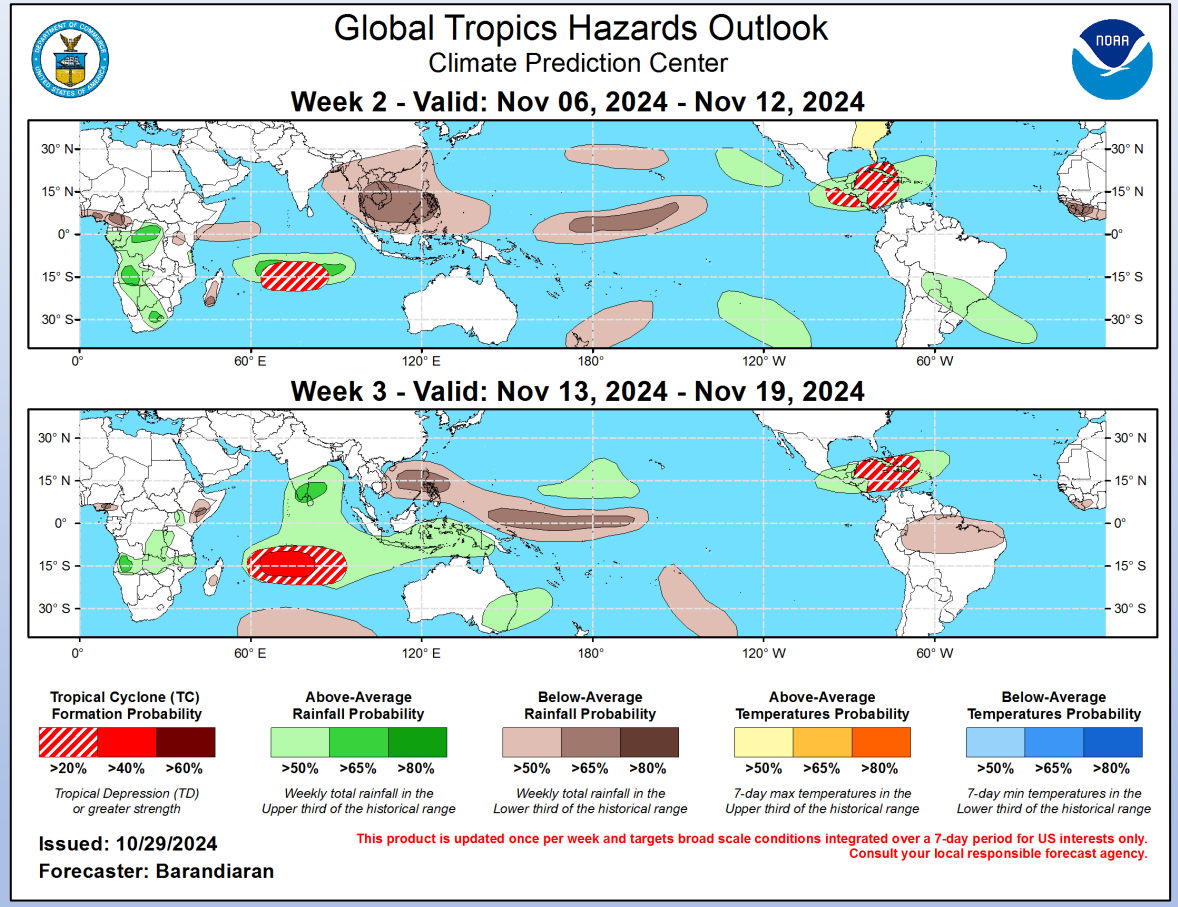


https://www.nhc.noaa.gov/gtwo.php?basin=atlc&fdays=7



https://www.nhc.noaa.gov/climo/

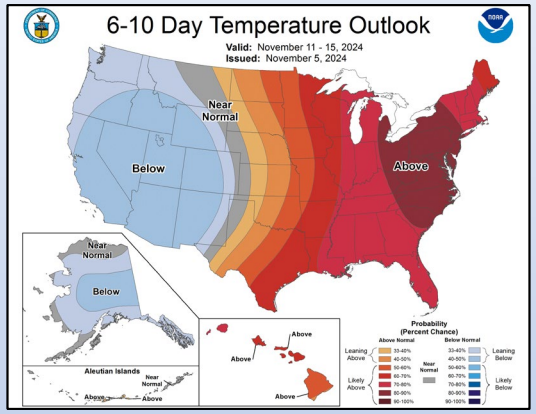
Week 2 & 3: Tropics Hazards Outlook

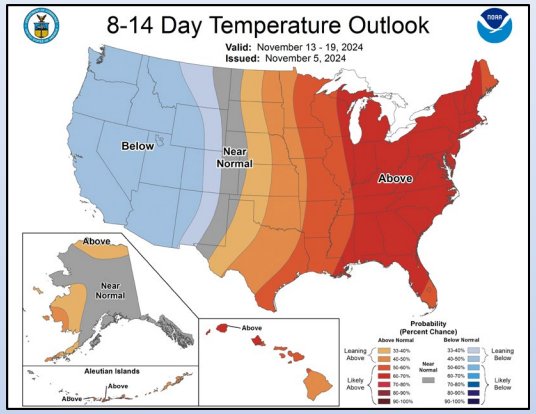


https://www.cpc.ncep.noaa.gov/products/precip/CWlink/ghaz/index.php

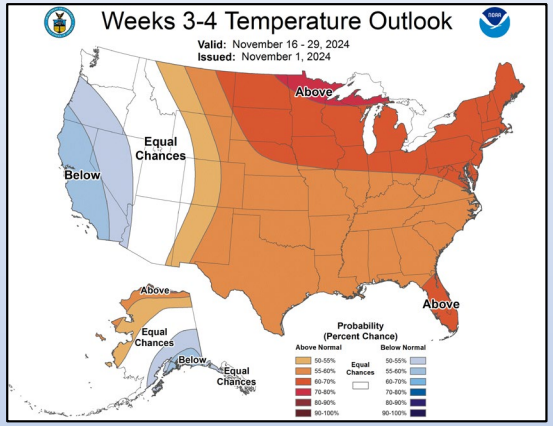
CPC Temp & Precip Outlook

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

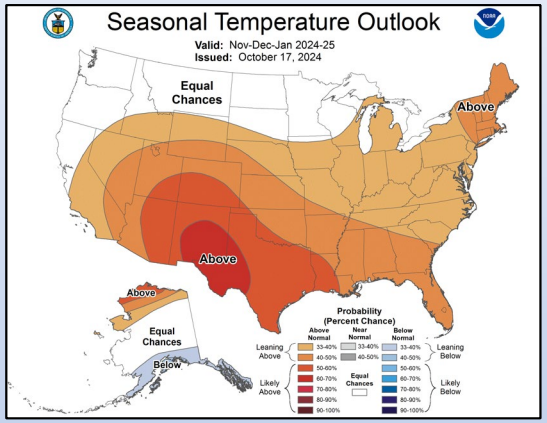


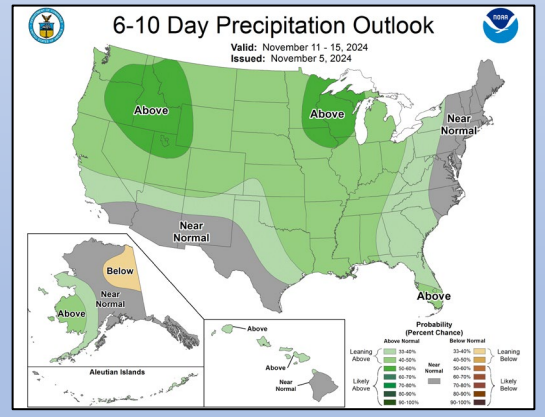


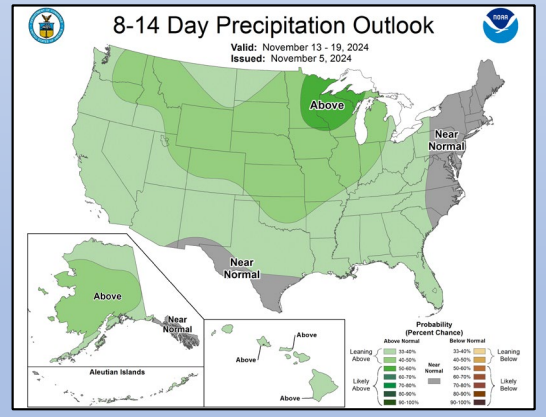
Updated 11/1/24

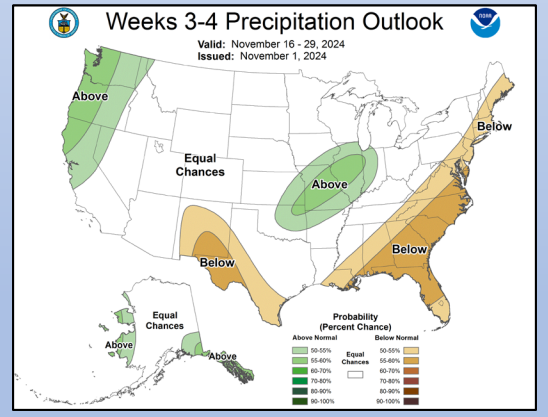


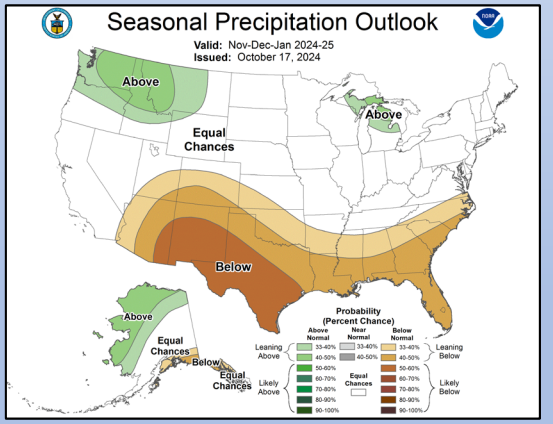
Updated 10/17/24 – [Discussion Link]











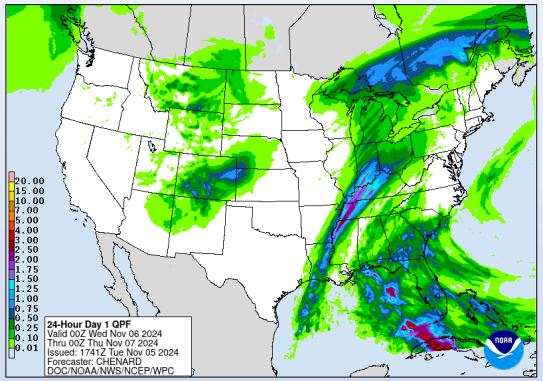
Note that October/November are generally the driest months of the year on average for NC, so that impacts what "normal" means for the time period.

Source: https://www.cpc.ncep.noaa.gov/

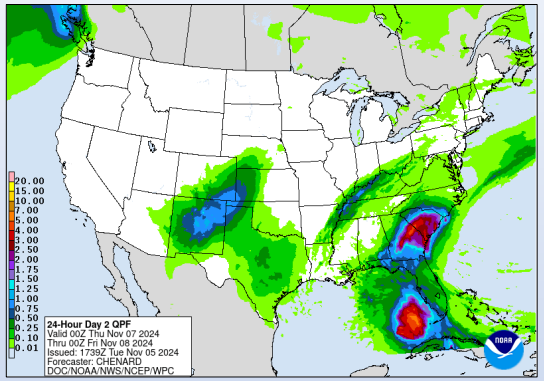
Quantitative Precipitation Forecast, 7-Day

Location: https://www.wpc.ncep.noaa.gov/#

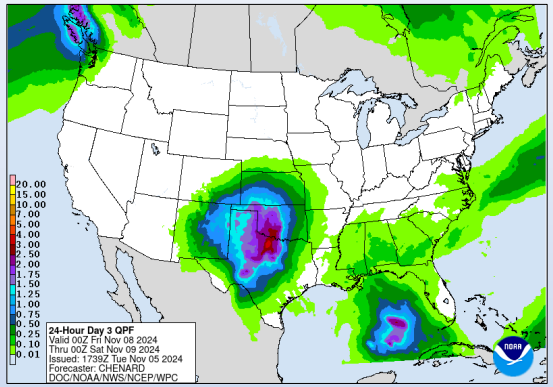
Day - 1



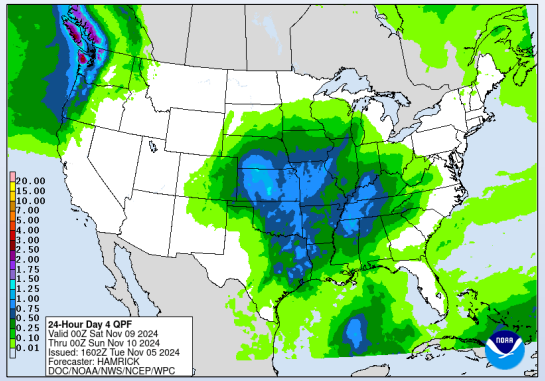
Day - 2



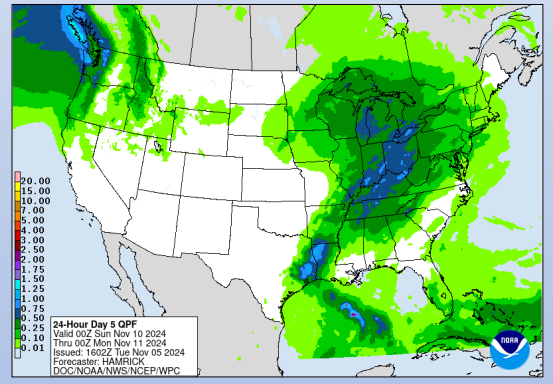
Day - 3



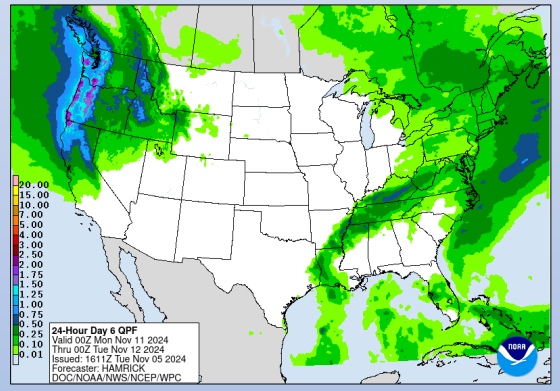
Day - 4



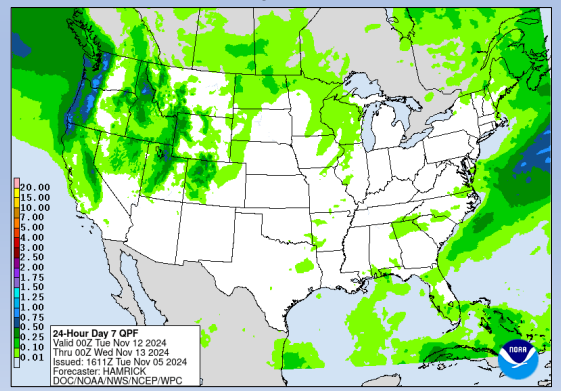
Day - 5



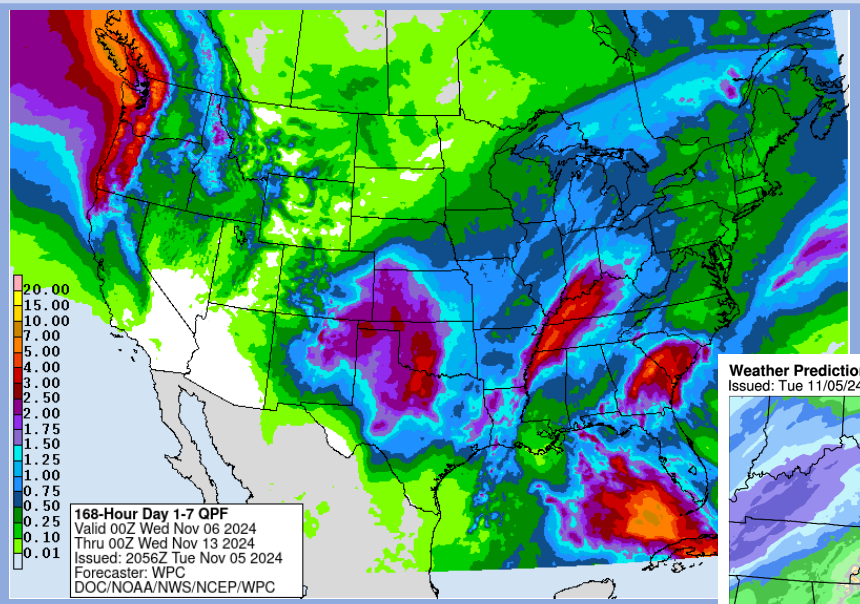
Day - 6

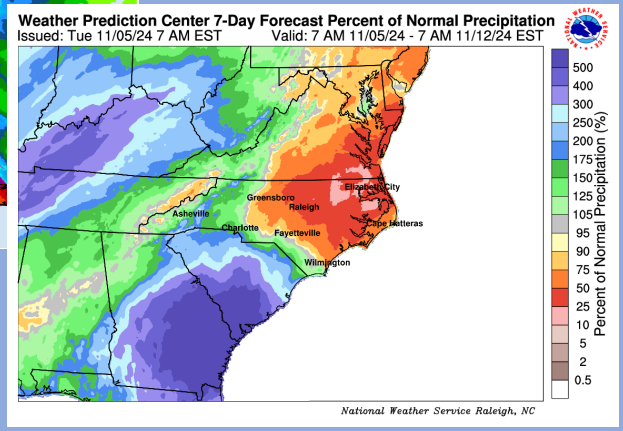


Day - 7



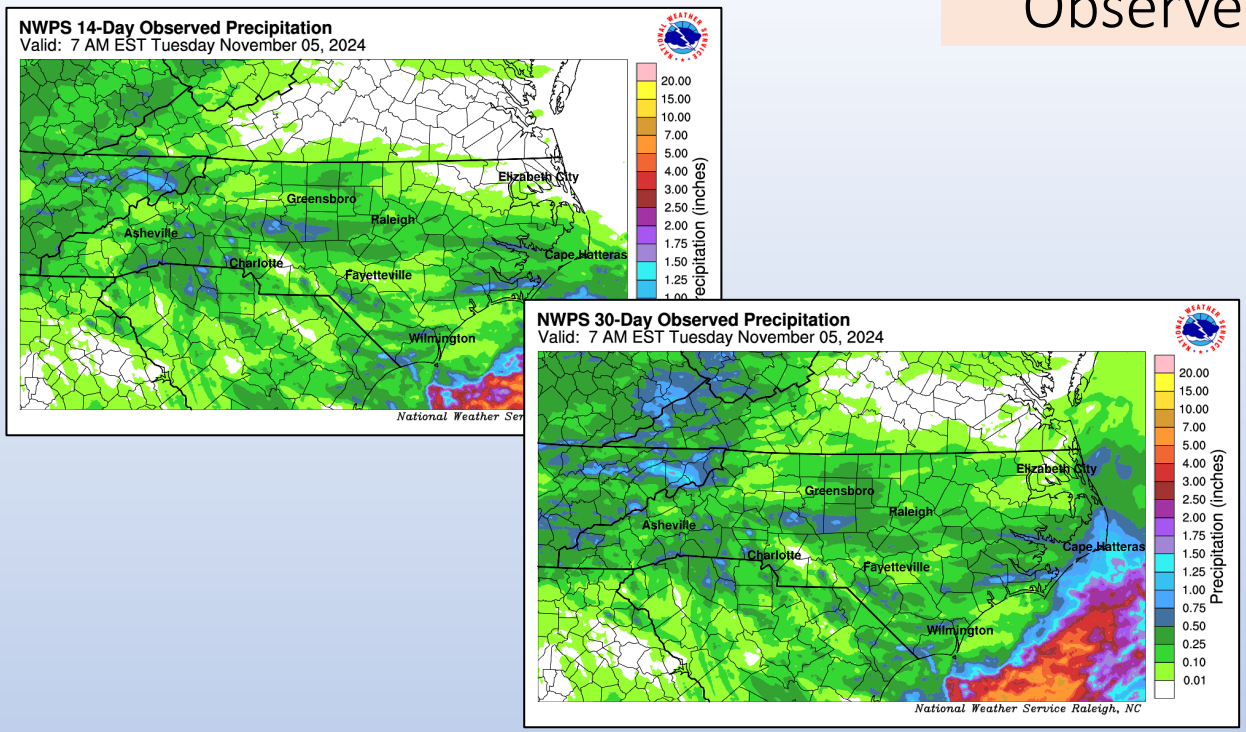
Important to note these values are subject to **significant change as weather system modeled tracks adjust farther out in time.*

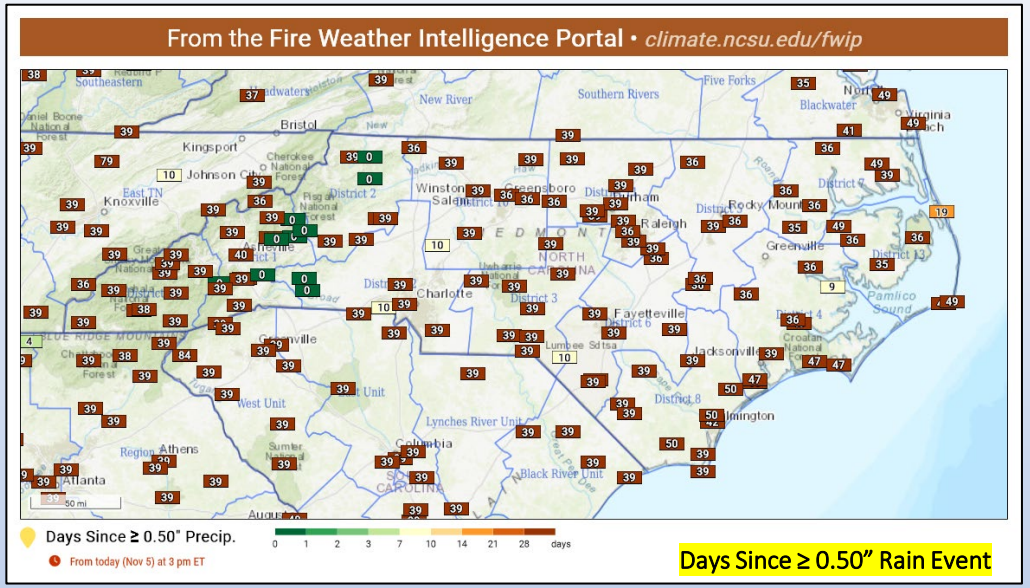




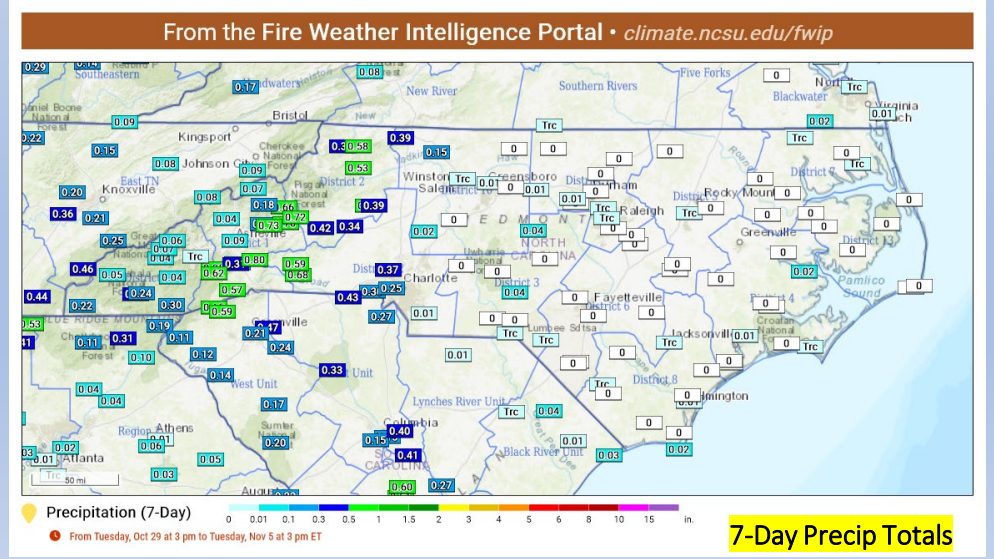
https://www.weather.gov/rah/qpf

Observed Precipitation

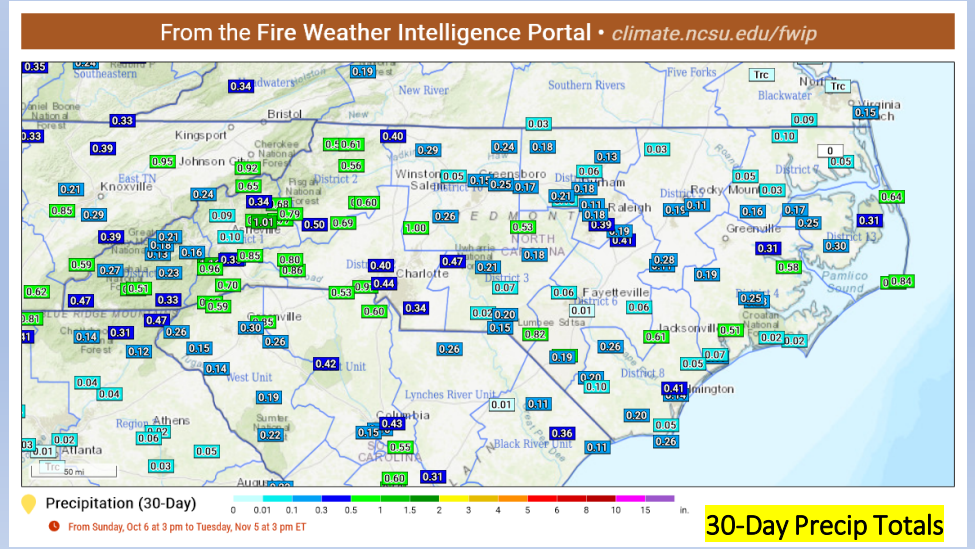




Days Since ≥ 0.50” Rain Event



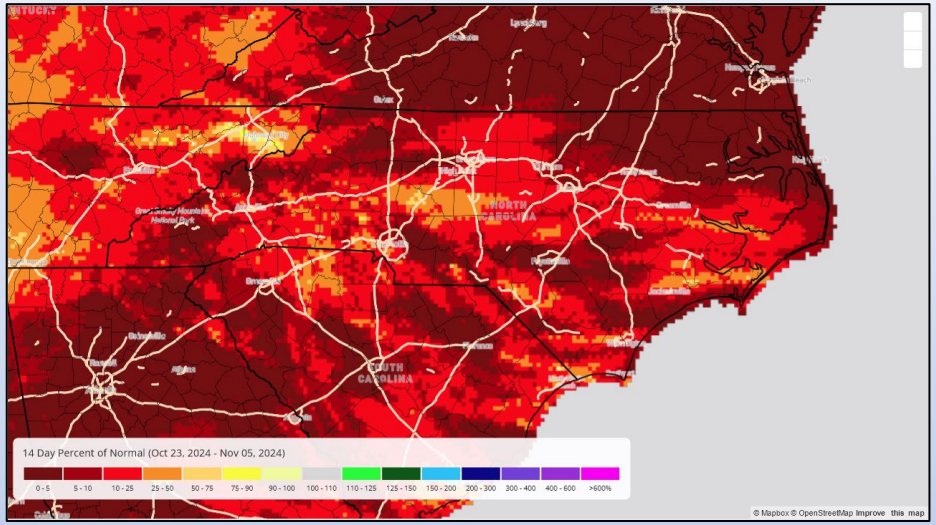
7-Day Precip Totals



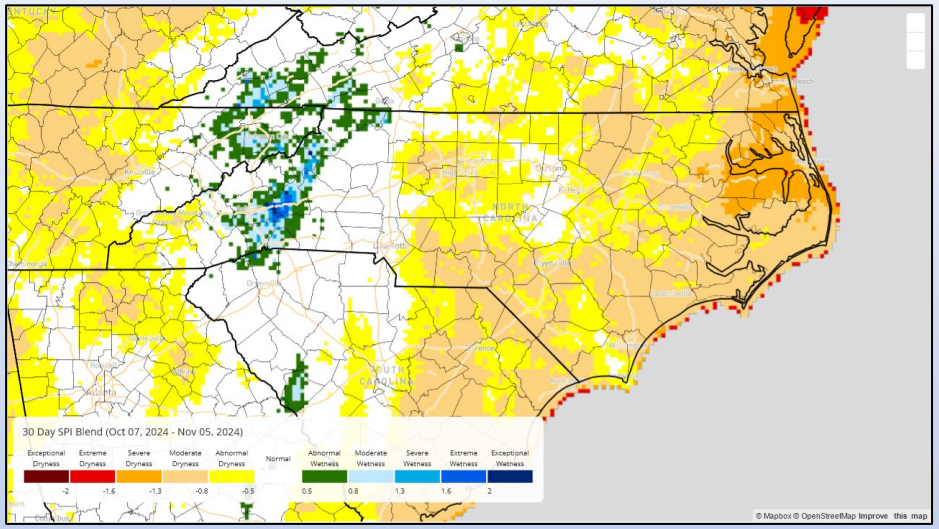
30-Day Precip Totals

Comparing Observed Precip to 30-Yr Normals, *SRCC* *(Ending Tuesday at 0800, 11/5)*

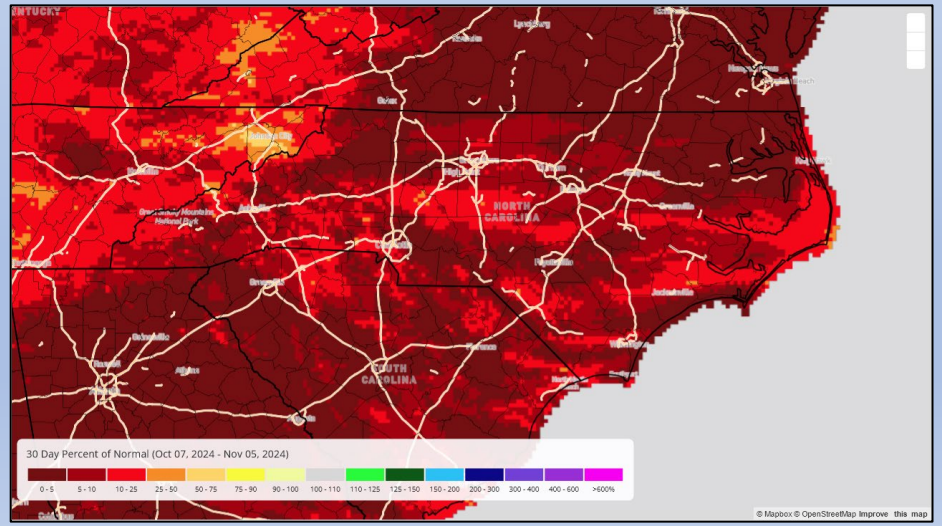
14-Day % of Normal



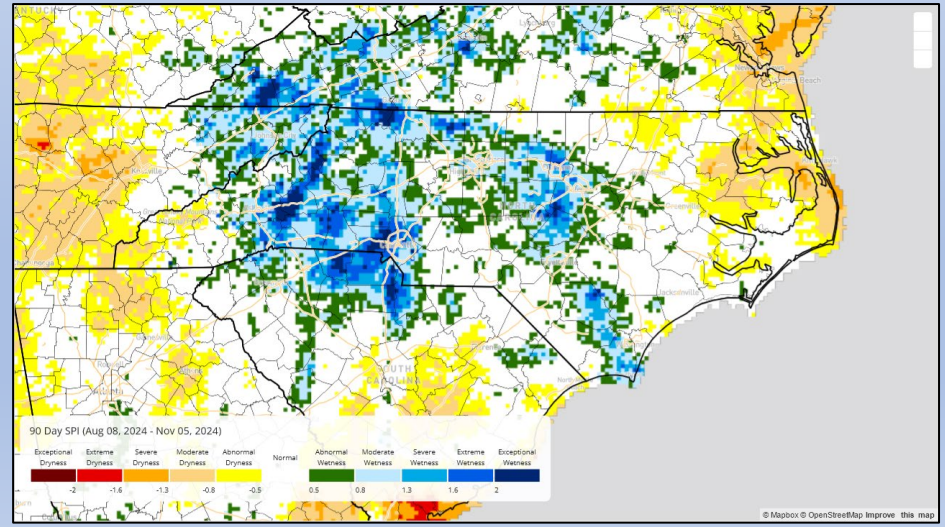
30-Day SPI Blend



30-Day % of Normal

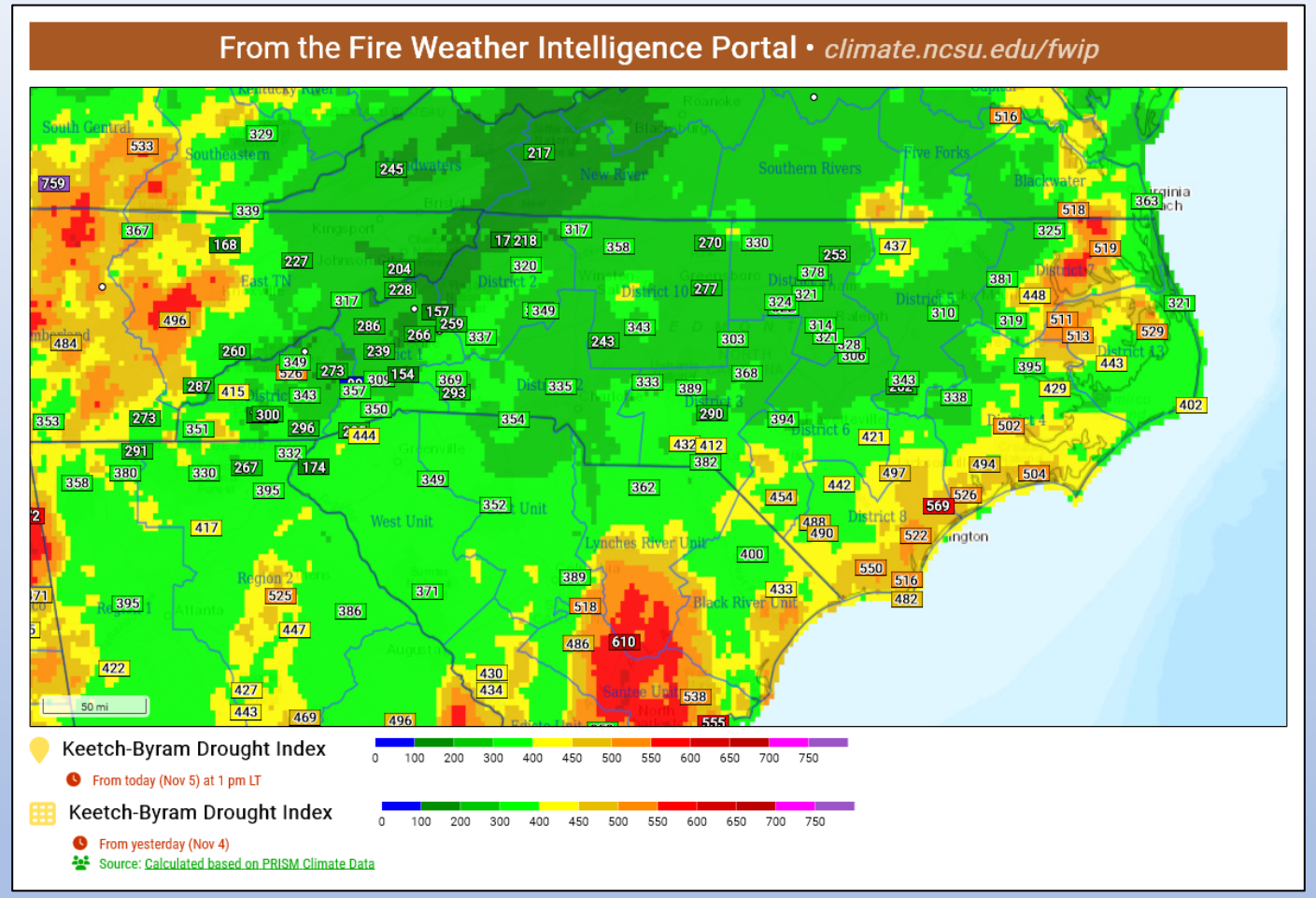


90-Day SPI

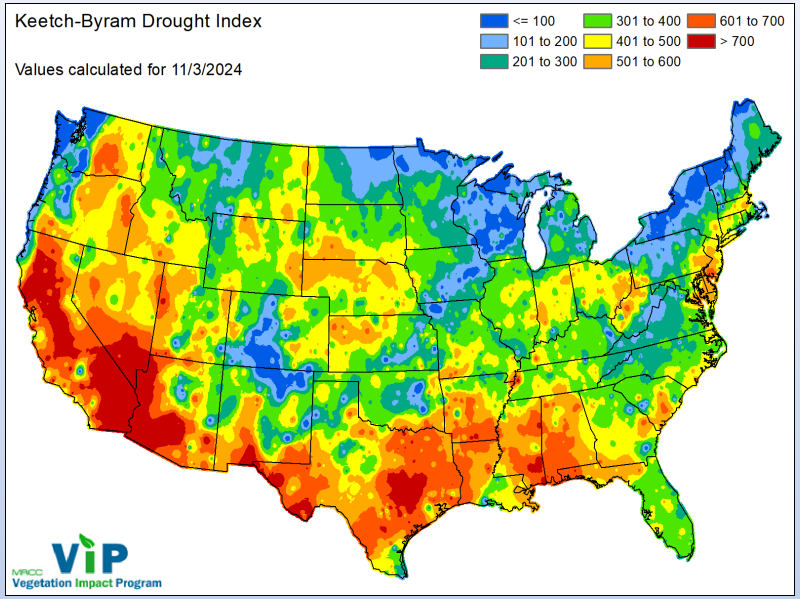


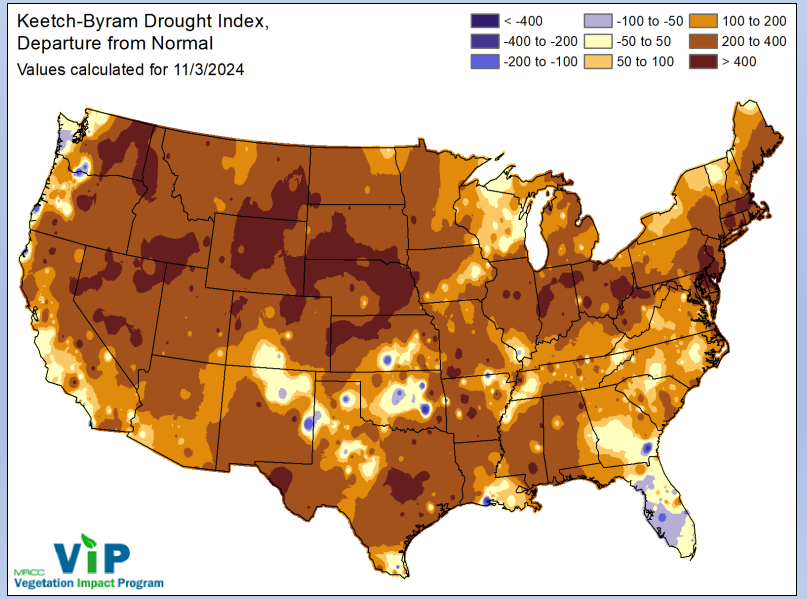
https://srcc.tamu.edu/water_portal/

KBDI - Station Points *FWIP (Point calculation from WIMS @ 1300 on 11/5/24)*

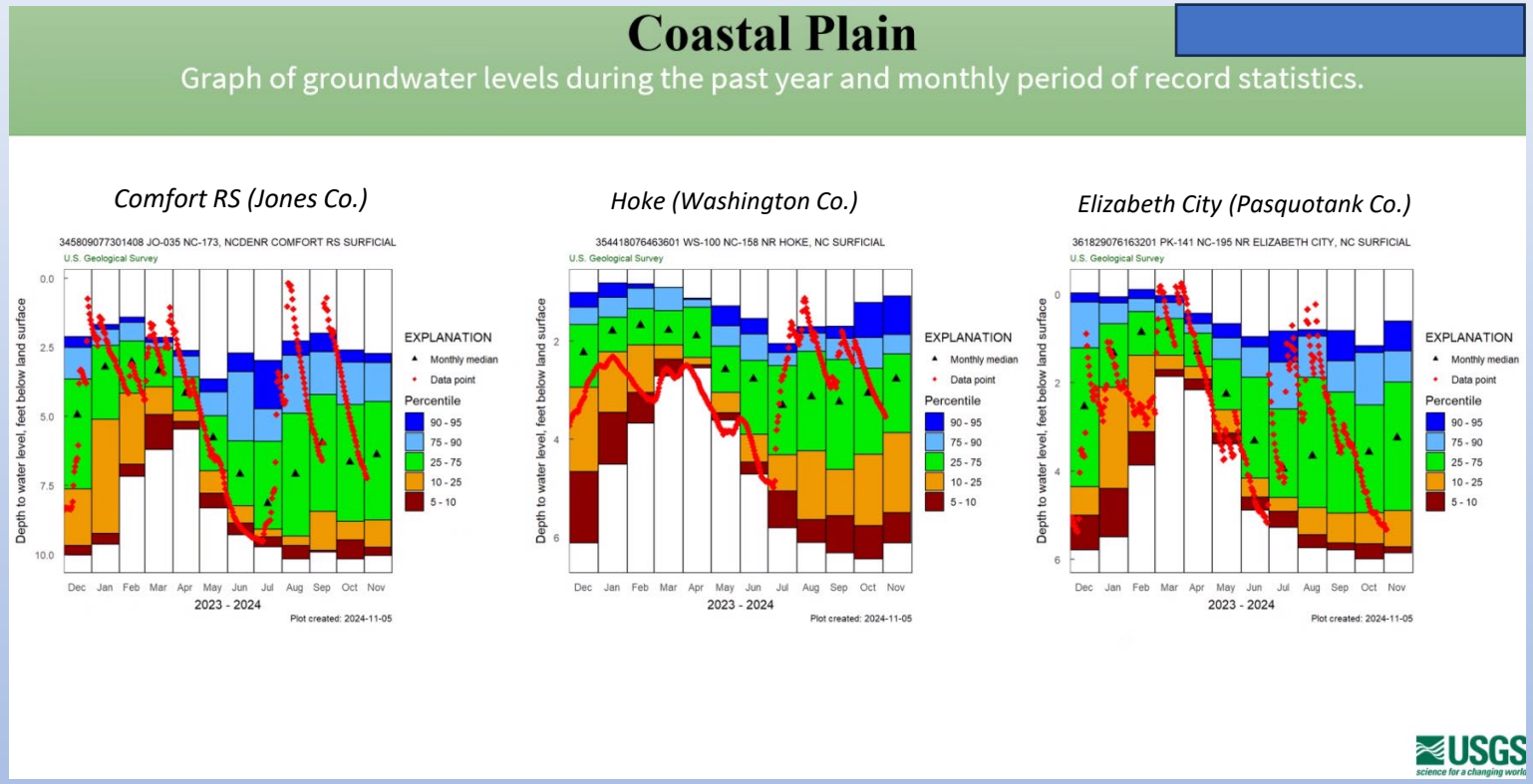


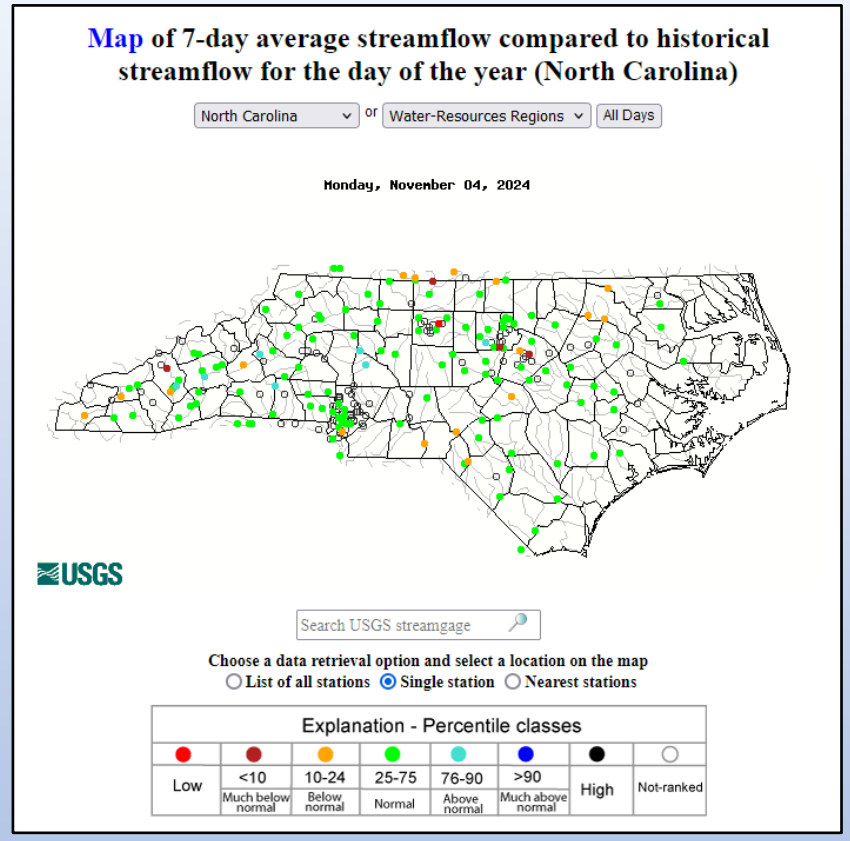
Product below is created by the Midwestern Regional Climate Center. See FAQ.





General Statewide Streamflow & Surficial Groundwater Well Monitoring at Coast



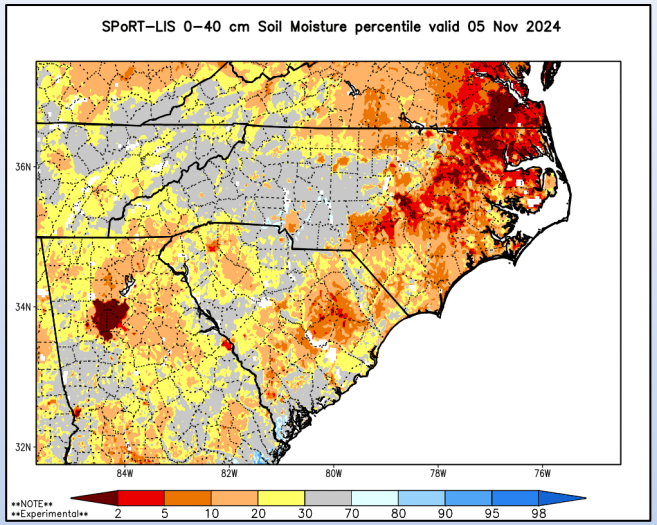


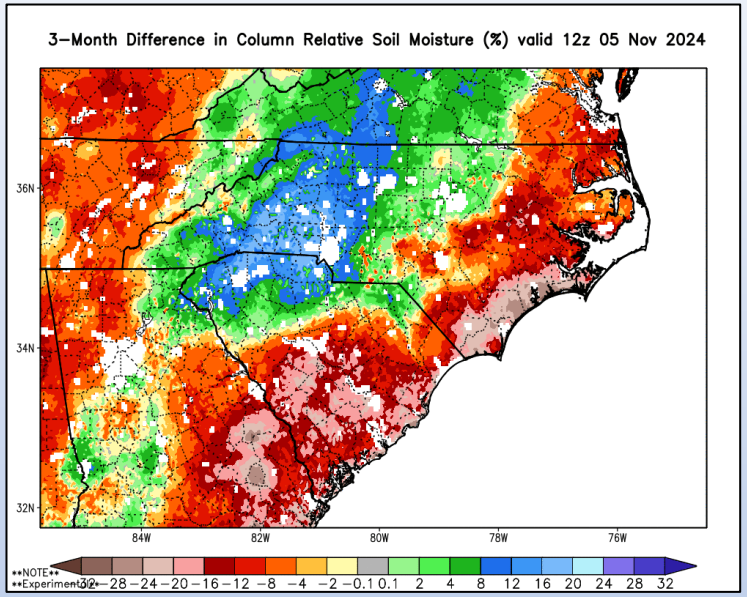
Source: https://waterwatch.usgs.gov/index.php?m=pa07d&r=nc&w=map

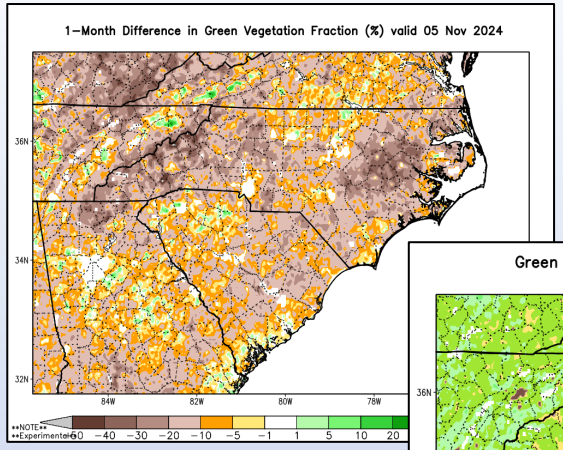
- Gauged streams continue to generally run near normal, although more streams now show in the 10-24th percentile for 7-day average flow.
- Three Coastal Plain monitoring wells – note that Elizabeth City is running well below normal for the month.

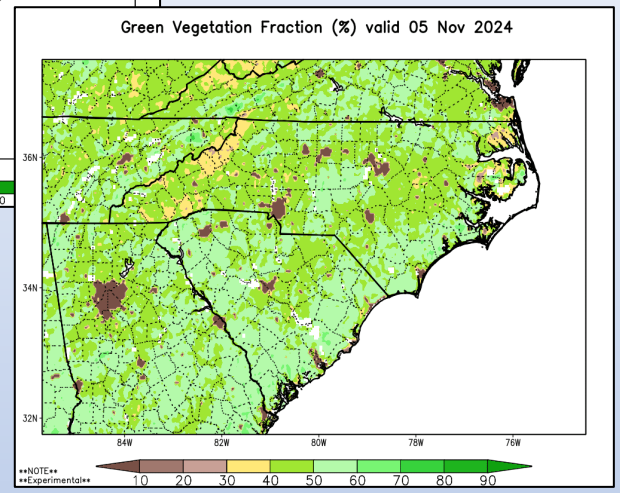
SPoRT Modeled Relative Soil Dryness

0-40 cm Depth

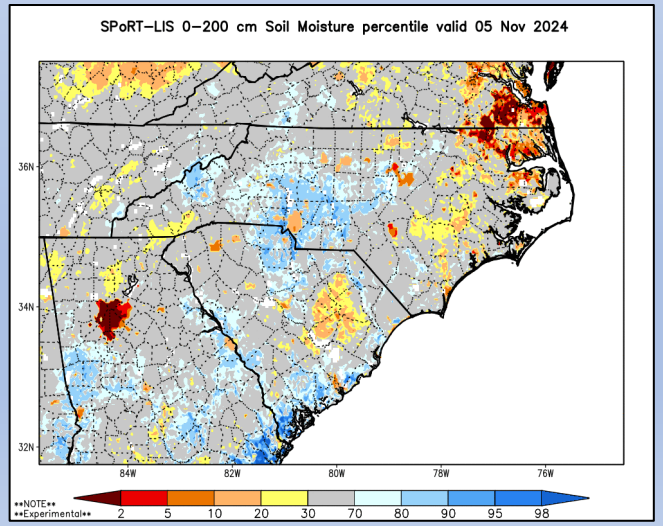




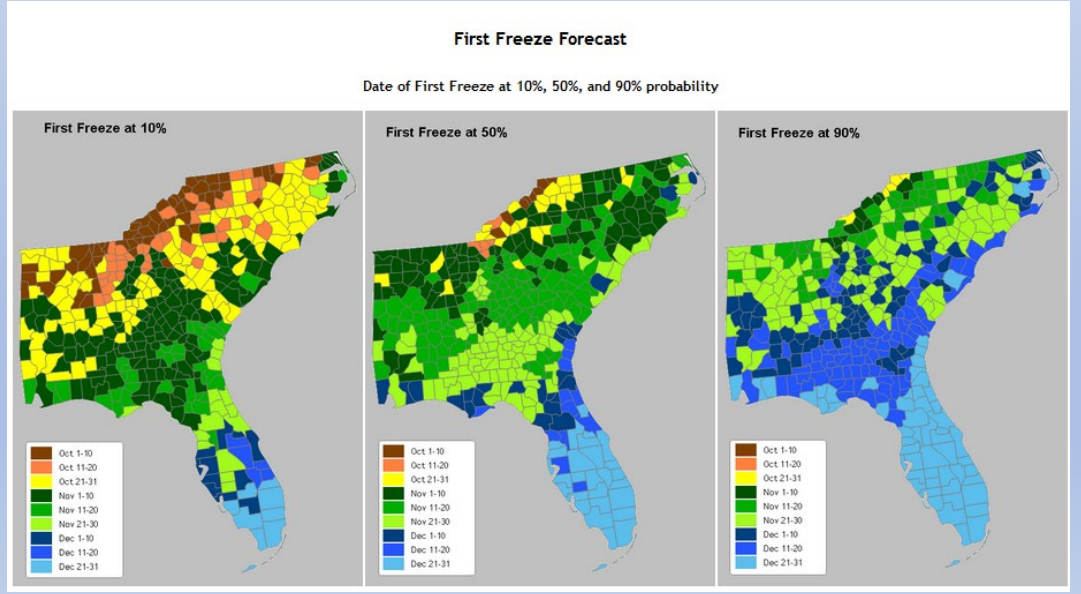




0-200 cm Depth



- See areas of **modeled** improvement & degradation near the surface and for the entire soil profile (left).
- The **"3-Month"** Soil Moisture Difference map shows Eastern drying along with input of Helene Rains in the West (center) still influencing the longer time scale.
- The Green Vegetation "1-Month Difference" map can provide useful context for various drought, seasonality & storm impacts to the landscape as compared to the current GVF (top right).
- The "First Freeze" Probability map provides context for general freeze related dormancy progression.

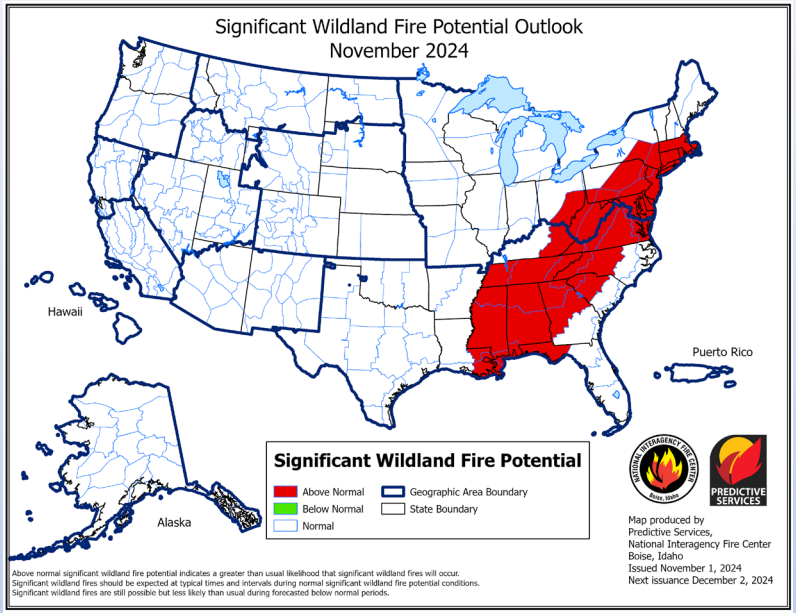


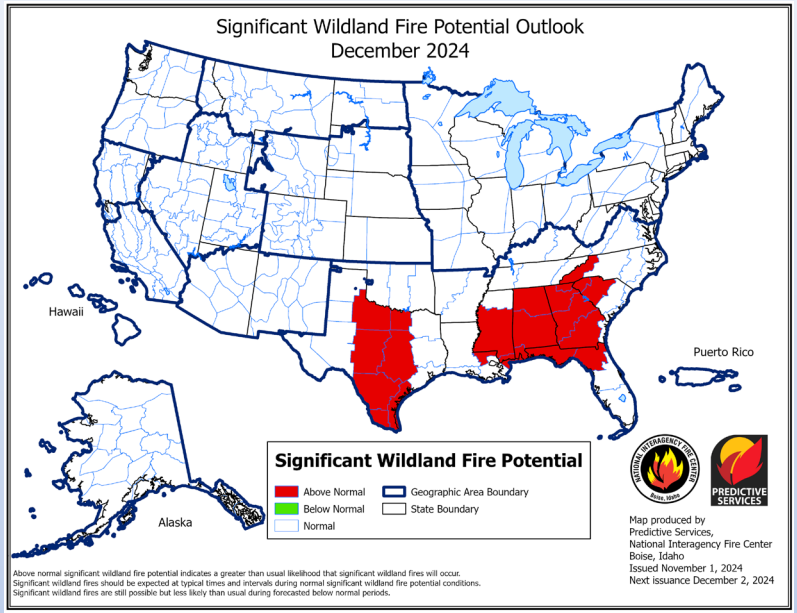
Source: https://weather.msfc.nasa.gov/sport/case_studies/lis_NC.html

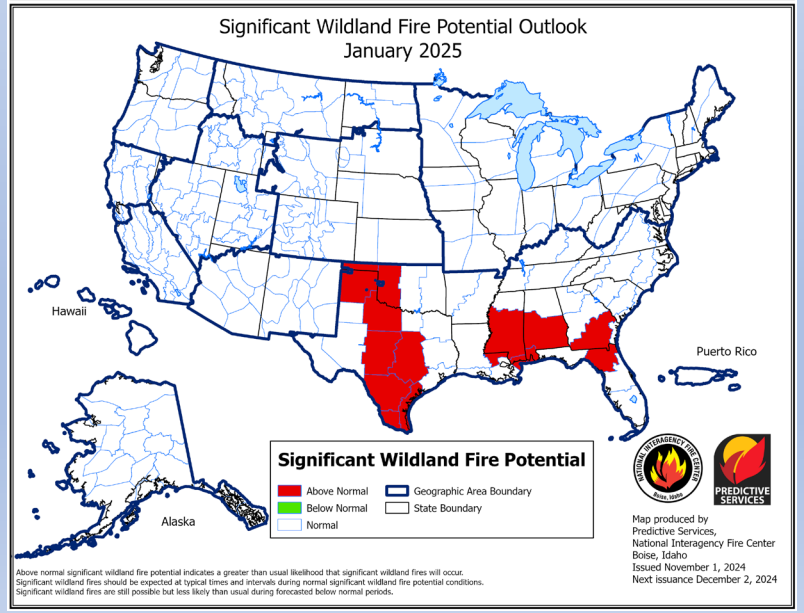
http://agroclimate.org/tools/freeze-risk-probabilities/

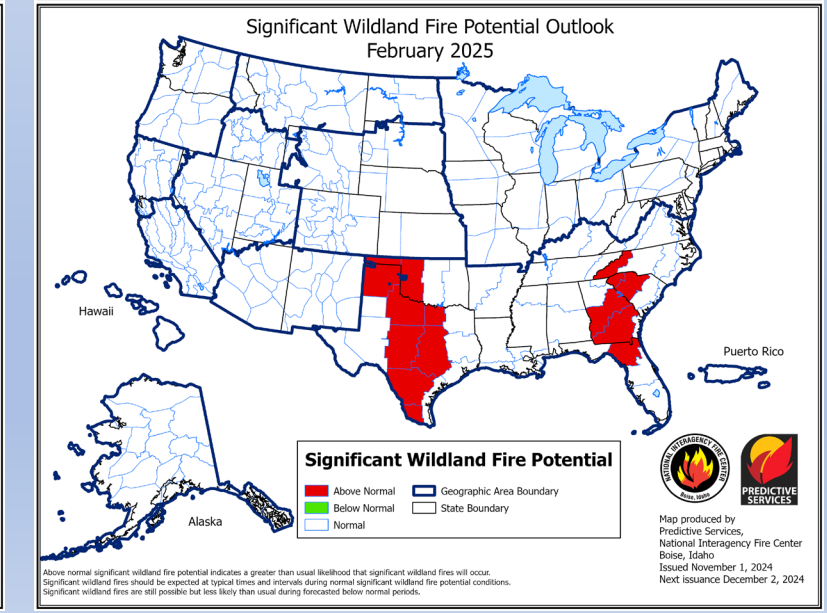
Significant Wildland Fire Potential Outlook:

Updated 11/1/24 – Next Update on 12/2/24





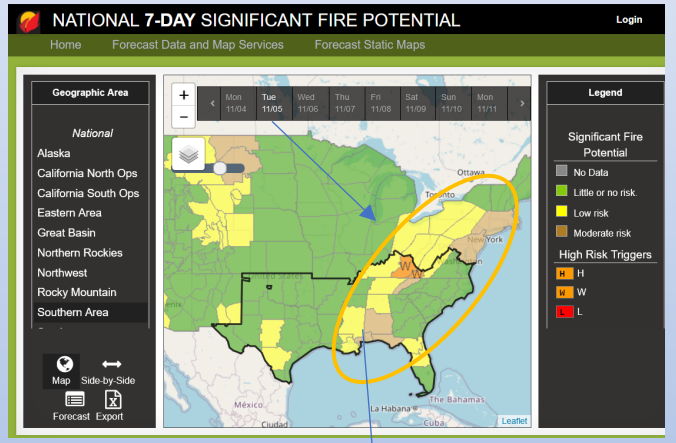


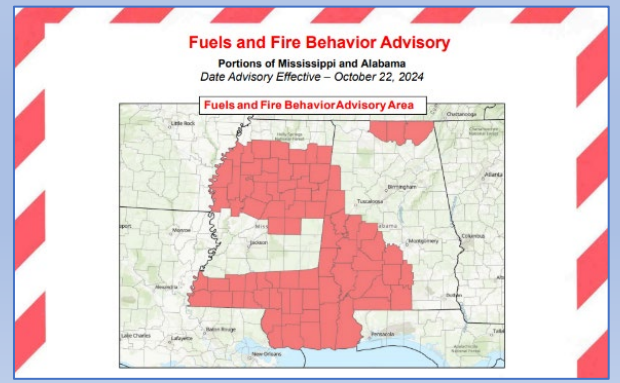


A significant fire is one that requires resources from outside the district (other than aviation). IA potential is based more on shorter term weather factors. Just a few days of dry weather can increase IA activity considerably as we have seen this year.

***Expansion of Above Normal due to fuel loading, dry, warmer temps for Nov.**

Below: Current information for general context as of 11/5/24



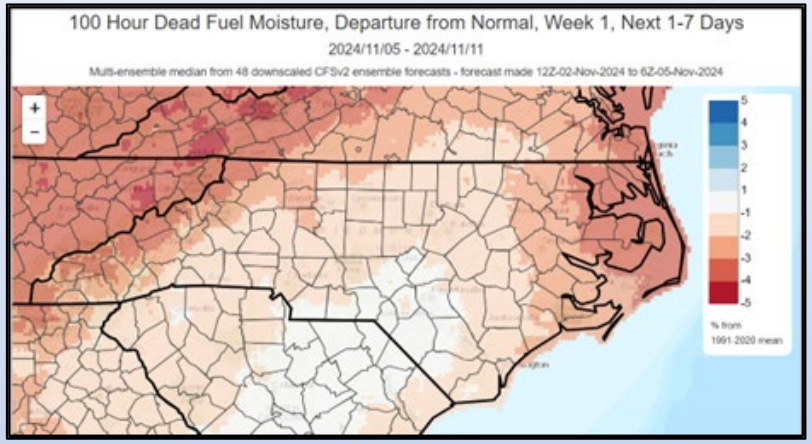


[Fuels and Fire Behavior Advisory Link]

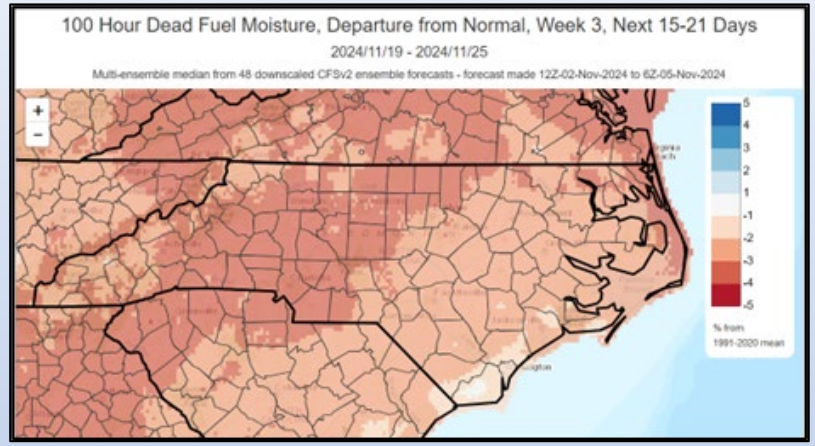
Modeled Departure from Normal by Week: 100-hr Fuels

Output relies on experimental forecast outputs and is subject to change

Week-1



Week-3

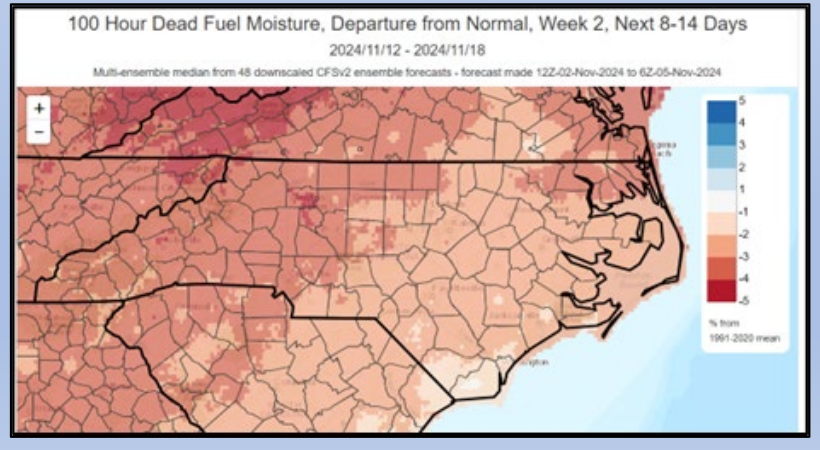


This output can provide insight into general drying trends and potential impacts to overall fire danger, especially prior to full green-up or in drought conditions. Outputs relate to interactions of warmer/colder temps, moist/dry air masses, precip amt/duration and overnight RH recovery trends.

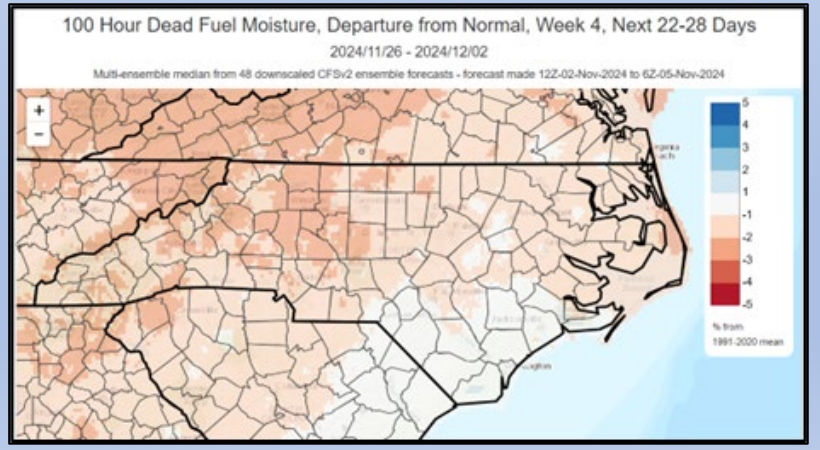
Note that <u>modeled</u> drier than normal conditions/areas increase moving into Weeks 2-3 with a return of more “near normal” conditions for Week 4 east.

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

Week-2



Week-4



From: https://climatetoolbox.org/tool/Climate-Mapper , 100-hr Map Link