

# Weekly Fire Danger Assessment NCFS – All Regions

For Time Period:

Friday (4/19/24) to Thursday (4/25/24)

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

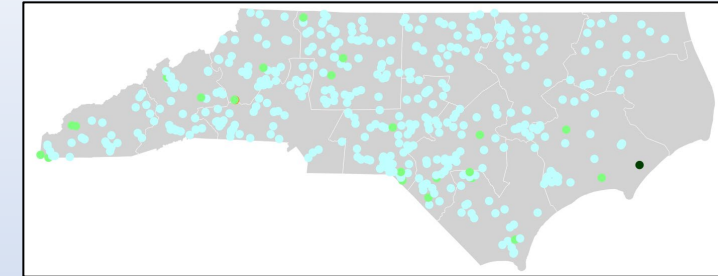
# Incident Activity

April 1 - 18

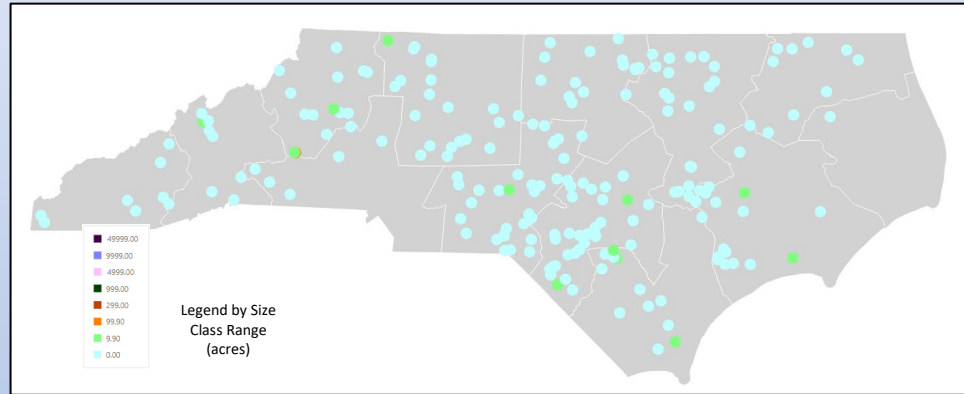
fiResponse Incident Location Map (for general context, preliminary data)

7-Day Activity: 4/12 – 4/18, 2024

Report: Business Intelligence Module, Response Trends Map



January: 10-yr avg is 305 fires for 511 acres  
 February: 10-yr avg is 553 fires for 1,427 acres  
 March: 10-yr avg is 914 fires for 4,214 acres  
 \*April: 10-yr avg is 655 fires for 3,219 acres  
 (Statewide averages, above, are based on FARS 2013-2022 Data)



Largest incidents Last 7 Days (Ending 4/18):  
 \*from fiResponse & preliminary reporting only\*

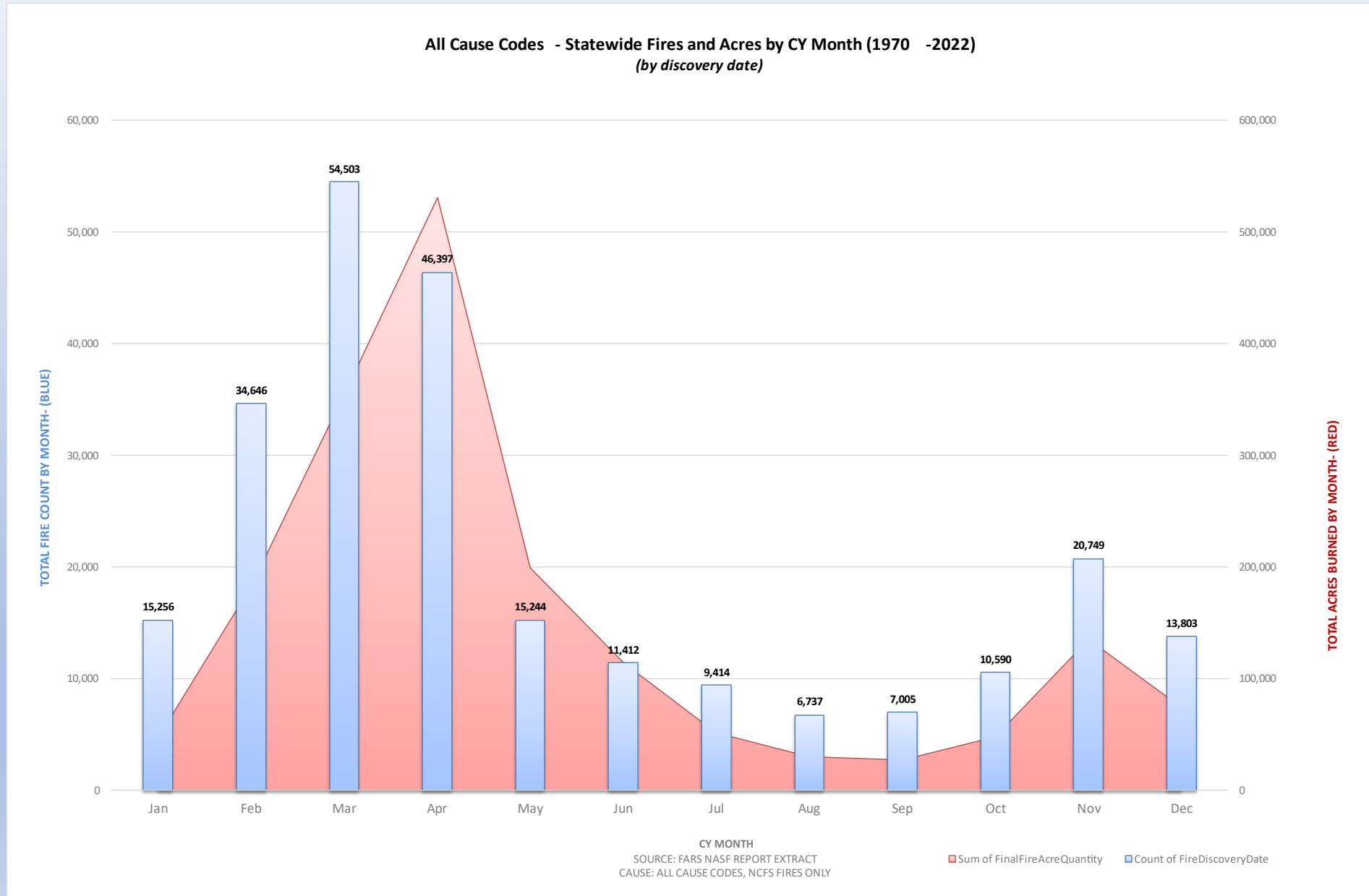
Incident Name	Discovery Date	Region	District	County	Acres
Henry Fork	4/15/2024	Region 3	District 2	Burke County	211.00
Horseshoe Lake Rekindle	4/15/2024	Region 1	District 8	Bladen County	50.00
Gum Spring Road	4/18/2024	Region 1	District 8	Bladen County	40.00
Gum Springs Road 2	4/18/2024	Region 1	District 8	Bladen County	40.00
Skill Rd	4/14/2024	Region 2	District 3	Moore County	30.00
Cedar Swamp	4/16/2024	Region 1	District 4	Carteret County	25.00
I-95 N	4/13/2024	Region 2	District 6	Robeson County	24.00
Cobb Town	4/15/2024	Region 1	District 4	Craven County	20.00
Madison County - Bull Crk Rd	4/18/2024	Region 3	District 1	Madison County	20.00
Bottomley Pines	4/16/2024	Region 2	District 10	Surry County	19.00

NCFS – By Region				
7-Day 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:	4/12 – 4/18, 2024			
Area	Wildfire Count	Wildfire Acres	RX Count (State & Private)	RX Acres (State & Private)
R1	43	329.2	2	206
R2	98	222.2	23	1,303
R3	39	136.8	3	738

“209” Criteria Fires for April - as of 4/18/24

Incident Number	Incident Name	Start Date	Location	Size	Containment / Completion Date
NC-NCS-240017	Highway 12	4/8/2024	R1/D4/Carteret	3,318 Acres	100% Contained on 04/11/2024
NC-NCS-240019	Henry Fork	4/15/2024	R3/D2/Burke	211 Acres	100% Contained on 4/18/2024
NC-NCS-240020	Knight Street	4/15/2024	R2/D3/Richmond	.75 Acres	Due to Structure Loss - 04/15/2024

# Distribution of **All Fires & Acres by Month** from 1970 - 2022



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

From Today's SACC [Daily Outlook](#) Discussion for the Southern Area (SA)

- Today – Clusters of showers and thunderstorms will continue along a front draped from TX to the Appalachians today. The fire environment will continue to improve today for most of TX and OK as cooler and more humid weather sets in, but pre-frontal conditions from South TX along the Gulf Coast to FL and the Carolinas will be hot and unstable.
  - Tomorrow – Look for post-frontal drying across the Appalachian states, with RH forecast to drop to as low as 20-30% in northern NC and much of VA; W/NW winds will gust as high as 20-30 mph, bringing quick drying; thunderstorm holdovers could emerge in some areas.
  - Sunday – Post-frontal dry air will linger from eastern KY into western and central VA; look for RH from 25-30%, with generally light winds.
  - 10-hour fuels: 10-hour fuel moisture will see large fluctuations across the Appalachians, with increasing moisture today and a drying trend over the weekend, followed by some increase in parts of the region next week (staying drier north until late week).
  - 100-hr fuels: The Appalachians and eastern states are forecast to see only scattered rainfall, with periods of drier than normal air leading to slightly below normal 100FM in most areas.
- 
- General Notes: Forecast rainfall over the week ahead will be highest from TX into southern OK, northern LA, parts of MS and southern AR – totals in excess of 3-5" are likely for some of these areas, with more to come in week two . Rainfall will trail off south and east of there, though some beneficial rain will impact the Carolinas and drier parts of GA most of the Appalachians could see scattered wetting rainfall, with more variability likely than what is indicated by NOAA [WPC] outlook.

## Seasonal Green-up & Observed Fire Behavior:

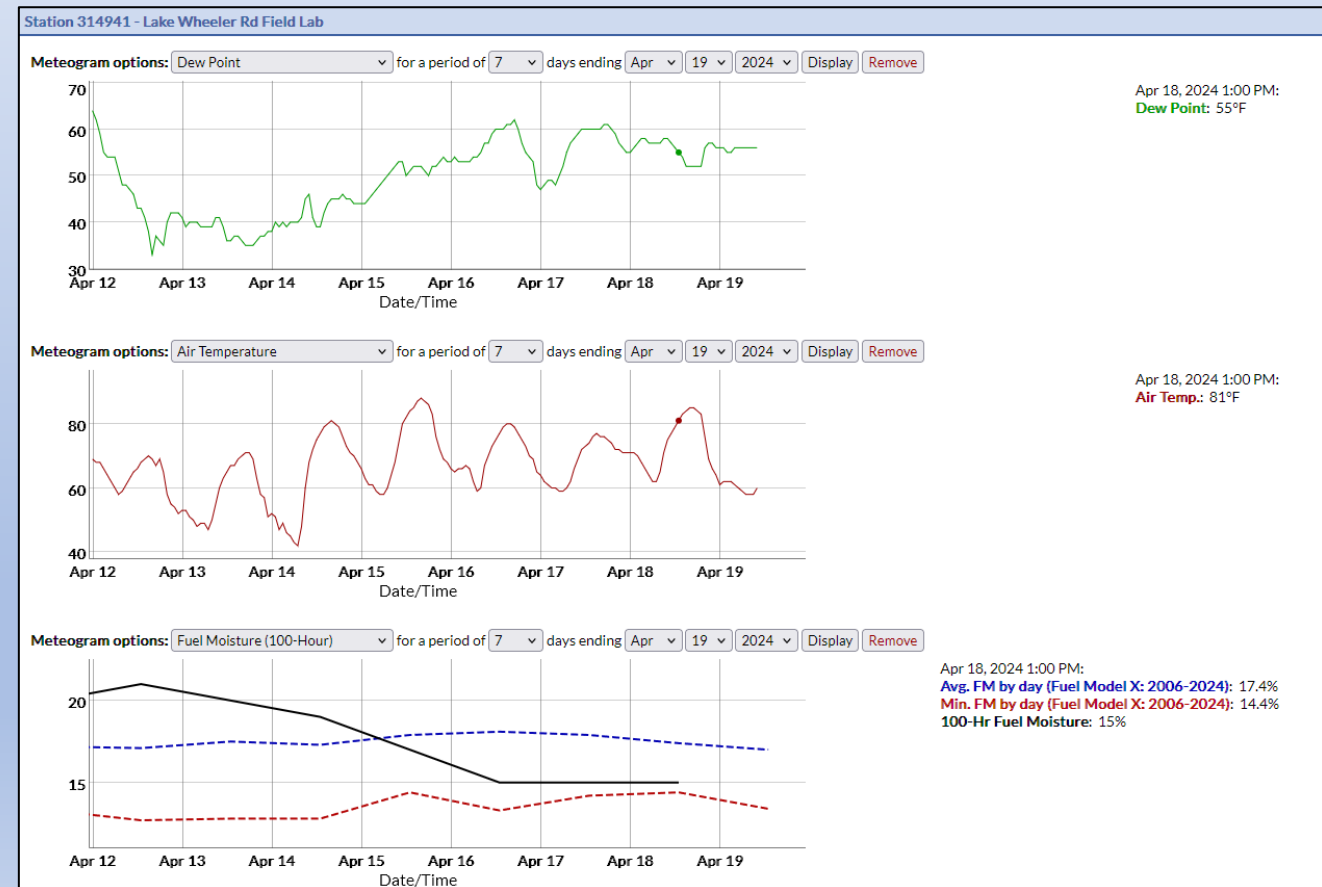
\*Important note on seasonal hardwood green-up/canopy cover VS associated fire behavior (throughout the state).

Shading and wind interception benefits are increasing as Spring progresses – however, be sure not to underestimate potential fire behavior, especially in extended periods with very dry air masses & repeated poor overnight recoveries.

Not only are dead fuels able to dry out further (the recent 100-hr dead fuel moisture trend is an expression of the dry air & higher temps), but higher evaporative demands will lead to faster declines in duff, foliar and soil moisture.

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FBAN Comment for the R3 Area: [Relating to Green-up/Canopy Cover & Dead Fuel Conditions] We still will have fire until significant rainfall occurs ALONG WITH a weather pattern change to more consistent moist air (higher dewpoints).

Example of recent dew point, air temp and 100-hr moisture trends from the Lake Wheeler Field Lab ECONet Station.  
(R2/D11/Wake Co.)



# Regional Comments for this Week – R1

- Green-up progressing from South to North
- D8 saw an active fire-day yesterday.
- It was noted on the SA call this morning that Croatan NF has picked up an instance of groundfire this week.
- See Slide #5 comments concerning relationship between green-up & observed fire behavior.

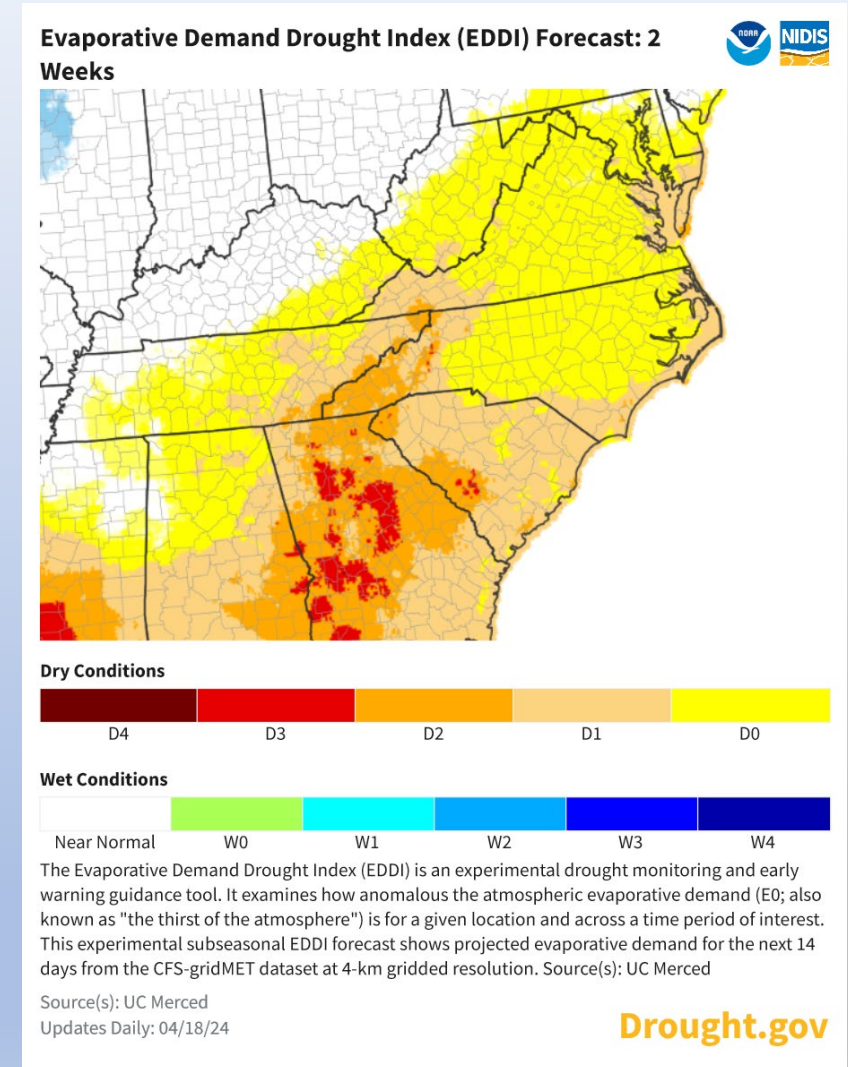
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## Other/General Comments:

Recent trends in rainfall amounts & duration over the past 90 days + increasing evaporative demand will continue to reduce available duff & soil moisture as Spring 24' moves forward.

If rainfall deficits continue it will be likely to see groundfire potential increase substantially, along with increasing risk of lightning caused fire starts.

The experimental map (right) indicates “thirst of the atmosphere” for the next 14 days. It does not account for predicted rainfall but implies potential for significant drying in areas that don’t receive good rainfall.



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

## Regional Comments for this Week – R2

- Very dry weekend led to a hot & dry week.
- D0 Drought in most D6 and D5 and parts of D3, D10 and D11.
  
- Dry weather has dropped 100-hr fuel moistures this week.
- Eastern Piedmont is the driest area with 100-hr fuels at seasonal minimums.
- Sand Hills, Western Piedmont and Blue Ridge Escarpment stations have all seen drops in values and are all below seasonal averages values now.
  
- Drier weather has elevated fire danger.
- Surface fuels in the forest are still dry and are carrying fire. Shade from leaf out has helped in lower fire intensity in hardwood areas. Pine stand are still actively burning.
- Upper layers of the duff and soil have dried out this week with continued green up and no additional precipitation.
  
- Leaf out ranges from 85-95% in D5, D6, D3
- Leaf out is around 80-90 % for most of D10 and D11.
- Surry/Stokes 50-60% with higher elevations behind by a week.
  
- See Slide #5 comments concerning relationship between green-up & observed fire behavior.

4/18 Image of general green-up (WGHP-TV Webcam in High Point, NC)

<https://www.weatherbug.com/weather-camera/?cam=WGHP>



## Regional Comments for this Week – R3

### Regional Comments:

- Following last week's precipitation, fuels quickly dried over the weekend with warm temperatures and breezy conditions.
- Temperatures were above average this week and some areas experienced isolated pop-up afternoon thunderstorms.
- Initial attack was the most significant on days with clear sky conditions and high fuel temperatures.
- Mountain laurel and Rhododendron fuels are available and dramatically contribute to fire behavior, especially when wind and slope alignment occurs.
- Fire occurrence has decreased over the last few weeks due to grass and roadside green up, however average fire size has increased/difficulty of control.
- Most of the region will experience light precipitation & associated storms today (4/19) with another round of precipitation on Sunday (4/21). Next week is expected to dry back out with average temperatures and breezy conditions.
- Canopy green-up at elevations below 2,000' is approximately 50-70%, between 2,000-3,000' green-up is 30-50%.
- See Slide #5 comments concerning relationship between green-up & observed fire behavior.



Gorges State Park  
Transylvania Co. 4/18/24



# 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

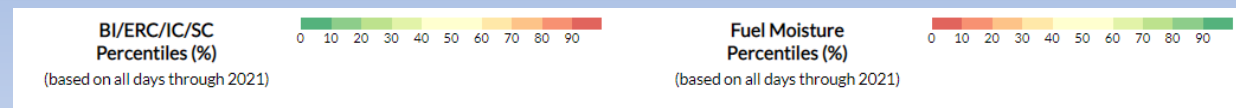
Averaged by FDRA SIG Group

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

### 4/18/24 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
<b>Southern Highlands</b>	3	2024-04-18	49.07 70.6%	22.27 68.8%	6.10 78.2%	19.87 68.3%	99.33	13.17 42.1%	20.45 63.9%	17.64 31.0%	23.79 93.9%	104.17	102.00	79.0°F	31.0%	W 3.3 mph	0.04 in.	2.0
<b>Central Mountains</b>	3	2024-04-18	28.97 52.5%	18.83 57.0%	5.33 70.9%	7.33 48.8%	89.33	10.81 24.4%	17.59 51.4%	17.21 19.3%	22.69 92.5%	184.23	155.67	79.3°F	36.7%	SSW 4.3 mph	0.00 in.	0.0
<b>Northern Highlands</b>	2	2024-04-18	47.70 67.1%	23.95 71.1%	9.80 88.8%	17.45 63.8%	68.00	9.57 10.2%	16.61 41.6%	18.04 35.9%	22.89 91.2%	156.70	144.00	77.0°F	31.5%	SW 5.5 mph	0.00 in.	0.0
<b>Blue Ridge Escarpment</b>	3	2024-04-18	65.57 69.9%	37.57 76.7%	13.67 89.8%	22.13 65.7%	114.00	8.73 14.7%	14.24 22.6%	16.27 15.0%	18.27 20.5%	129.20	120.00	85.0°F	25.7%	WNW 6.3 mph	0.00 in.	0.0
<b>Western Piedmont</b>	3	2024-04-18	52.90 59.9%	31.20 62.4%	10.20 78.4%	16.37 56.7%	176.33	9.48 16.3%	16.89 58.2%	17.48 33.5%	21.56 87.4%	134.63	124.00	85.3°F	31.0%	WNW 4.3 mph	0.00 in.	0.0
<b>Sandhills</b>	3	2024-04-18	35.40 46.1%	38.83 48.2%	12.93 73.8%	5.70 61.1%	185.67	9.03 19.9%	16.63 54.1%	16.23 14.6%	20.54 77.5%	234.03	190.67	86.3°F	29.3%	NNW 7.0 mph	0.00 in.	0.0
<b>Eastern Piedmont</b>	4	2024-04-18	33.43 17.9%	21.78 25.8%	6.83 48.1%	8.90 13.6%	158.75	9.85 24.4%	15.54 44.2%	15.21 5.2%	19.96 62.9%	191.23	167.00	82.3°F	35.0%	WNW 8.5 mph	0.00 in.	0.0
<b>Southern Coastal</b>	7	2024-04-18	30.63 24.4%	22.57 34.2%	6.44 52.4%	7.03 17.4%	214.14	9.78 22.6%	17.83 57.8%	17.55 30.4%	21.64 77.3%	201.73	153.00	87.3°F	35.4%	SW 5.0 mph	0.00 in.	0.0
<b>Northern Coastal</b>	4	2024-04-18	21.38 15.8%	20.63 29.5%	4.18 35.0%	3.65 10.3%	233.75	10.10 22.0%	17.69 63.0%	17.65 38.0%	20.94 70.2%	204.93	177.00	84.3°F	42.8%	SSW 3.5 mph	0.01 in.	0.5

Fuel Model X is composed of 1-hr, 10-hr and live fuels (when dormant act as dead fuels) – hence responsiveness to rapid drying. All FDRAs within NC (except Sandhills) utilize FM-X at the present time.



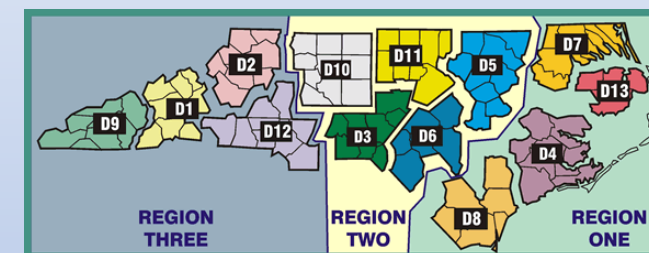
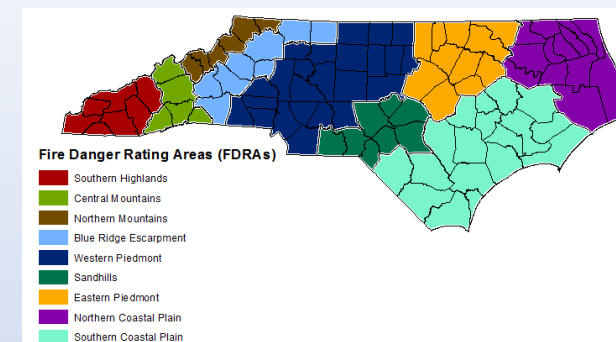
# Important notes for next slide group:

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

- These are extracts from FF+ using weekly 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:

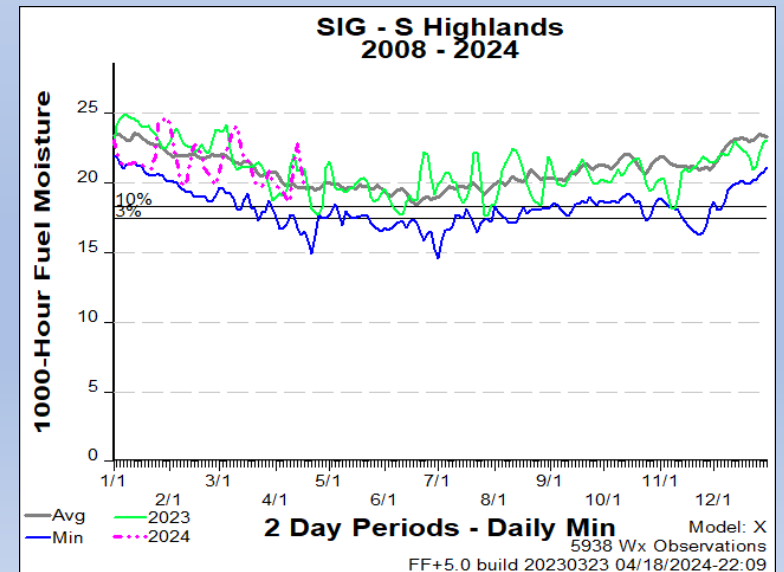
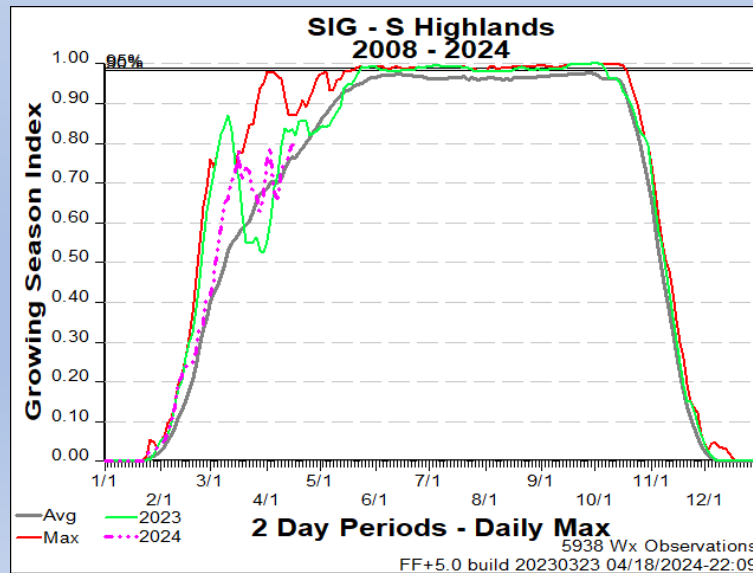
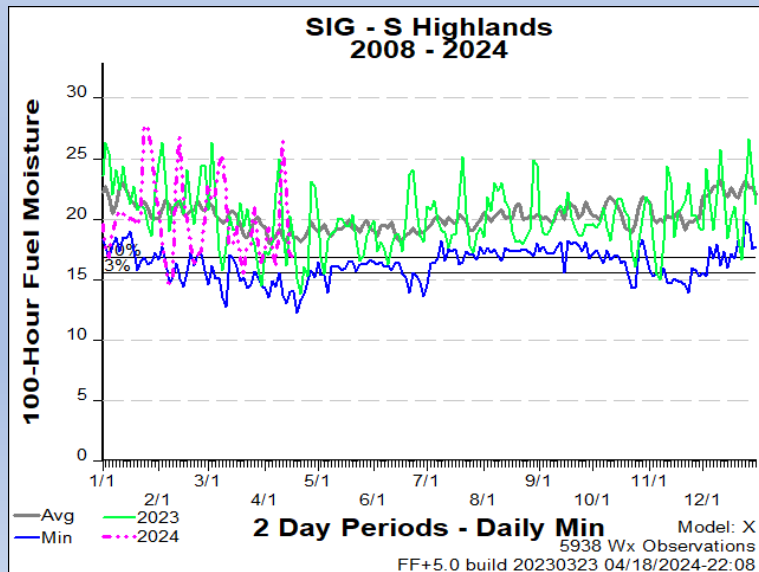
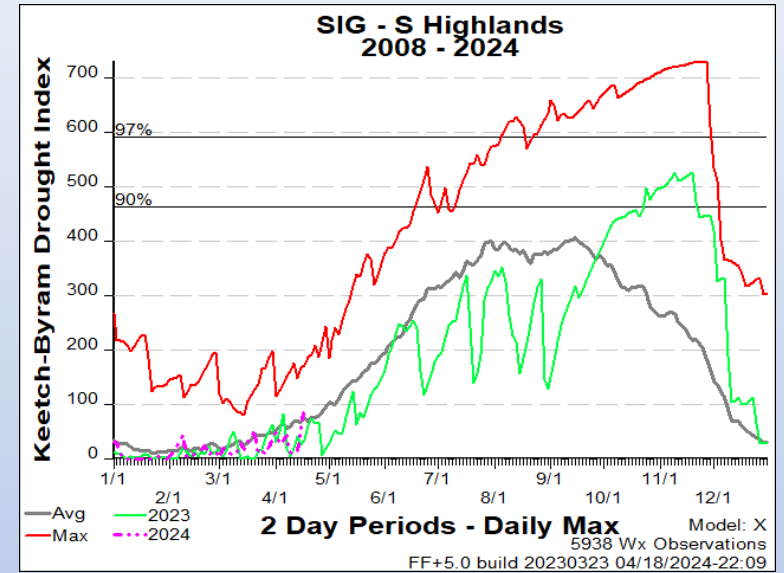
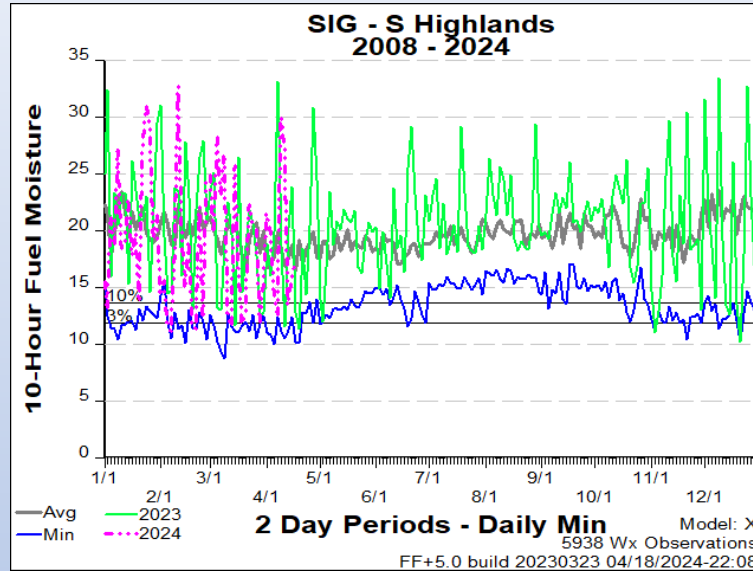
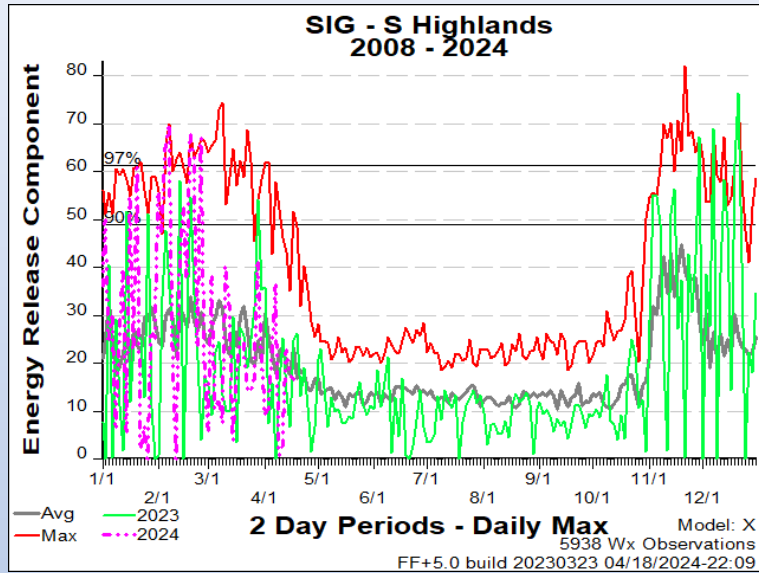
- Read the key and notes for each FDRA, included on the outlook matrix page.
- Forecasts are variable and can change significantly over a forecast cycle and across the landscape.
- This is another tool for gaining better situational awareness, and should be used for general planning purposes only.
- 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 9-26 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



## 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	FRI 19-Apr	SAT 20-Apr	SUN 21-Apr	MON 22-Apr	TUE 23-Apr	WED 24-Apr	THU 25-Apr
Avg. Max. Temp. (°F)							
Avg. Min. Humidity (%)							
Avg. 20' Wind Speed (mph)							
Avg. Wind Direction*							
Avg. Probability of Precip. (%)							
Days Since a Wetting Rain**							
Forecast ERC (Fuel Model X)	24.9	17.6	21.6	18.9	22.0	23.2	20.4
Forecast BI (Fuel Model X)	62.3	46.6	50.7	48.5	64.7	69.3	54.0
Forecast IC (Fuel Model X)	7.2	4.2	4.4	4.3	6.7	7.9	5.9
Forecast 100-Hr. FMC	17.4	17.7	18.1	17.8	17.7	17.5	17.5
Forecast 1000-Hr. FMC	23.2	22.9	22.7	22.5	22.3	22.2	22.0
KBDI	99.3						

The top six fields on the Weekly Outlook tool are not populated due to an on-going data issue related to the NWS digital forecast API.

#### 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

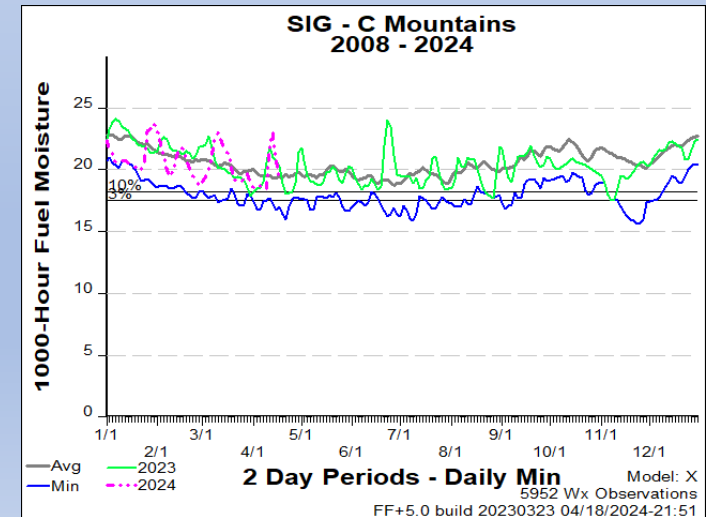
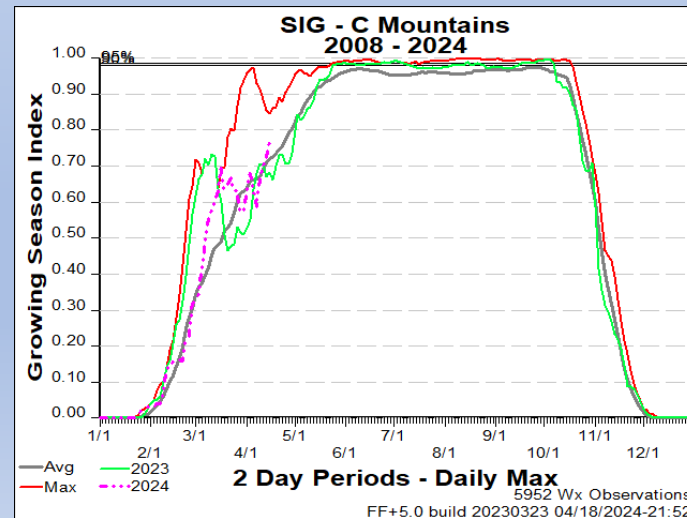
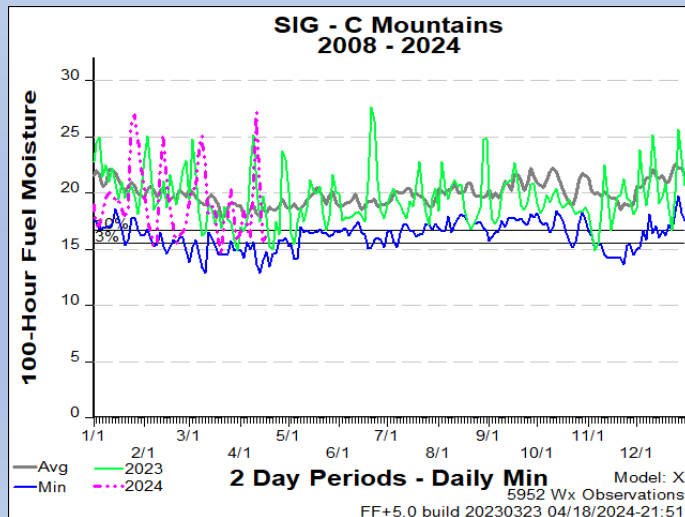
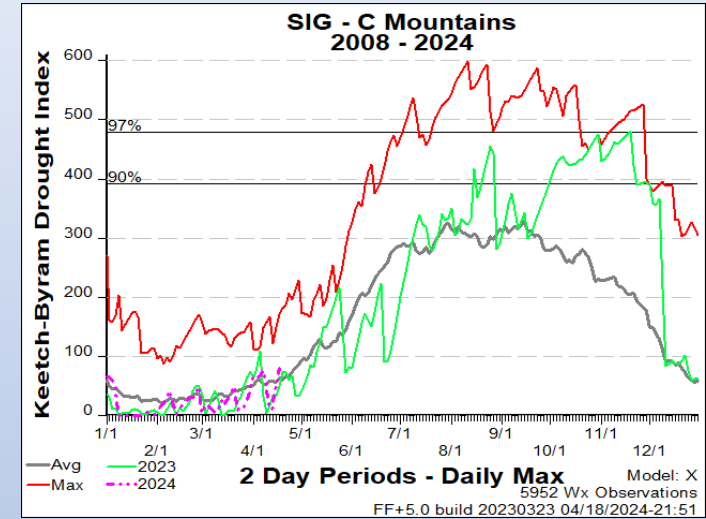
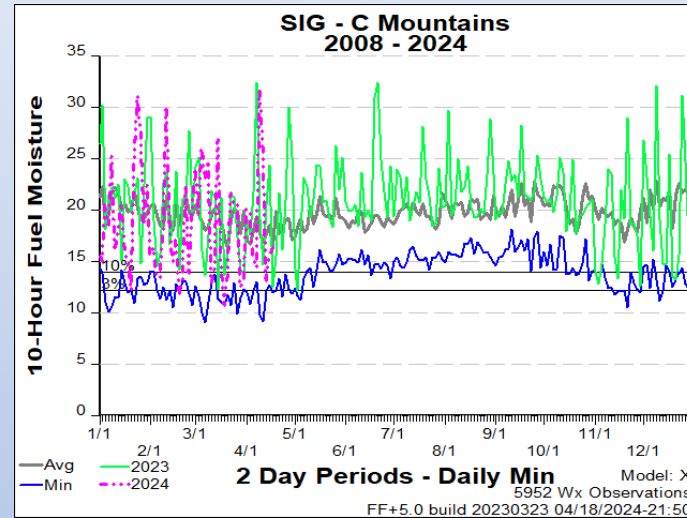
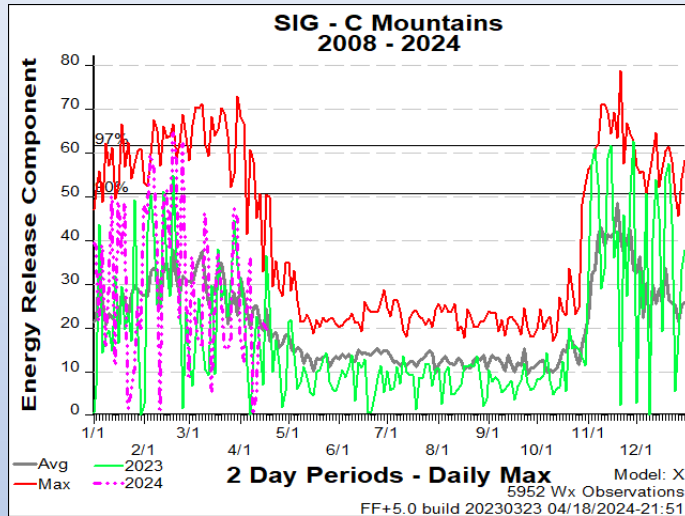
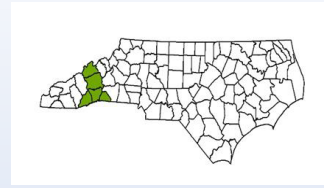
Values in the table above are averages from 3 stations in this FDRA:

- 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

# FDRA – Central Mountains



Weekly Outlook							
Central Mountains FDRA - General Fire Danger Forecast							
For planning purposes only; forecast is subject to change							
Four or more <b>RED</b> blocks in a day signals the potential for a <b>Critical Fire Day</b>							
DAY	FRI 19-Apr	SAT 20-Apr	SUN 21-Apr	MON 22-Apr	TUE 23-Apr	WED 24-Apr	THU 25-Apr
Avg. Max. Temp. (°F)							
Avg. Min. Humidity (%)							
Avg. 20' Wind Speed (mph)							
Avg. Wind Direction*							
Avg. Probability of Precip. (%)							
Days Since a Wetting Rain**							
Forecast ERC (Fuel Model X)	16.3	12.6	16.6	17.4	17.5	17.0	16.5
Forecast BI (Fuel Model X)	32.3	30.5	29.7	34.9	38.2	38.3	34.9
Forecast IC (Fuel Model X)	5.1	3.4	3.3	4.4	5.2	5.6	4.8
Forecast 100-Hr. FMC	16.3	16.7	17.2	16.9	16.5	16.4	16.3
Forecast 1000-Hr. FMC	22.0	21.7	21.5	21.4	21.2	21.0	20.8
KBDI	89.3						

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- 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

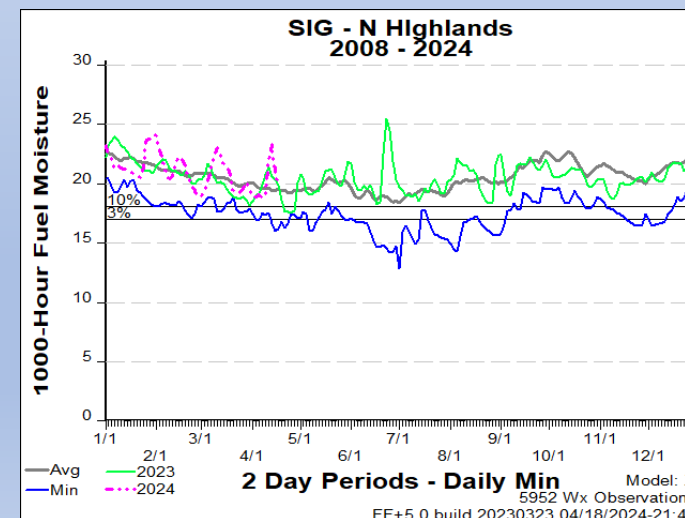
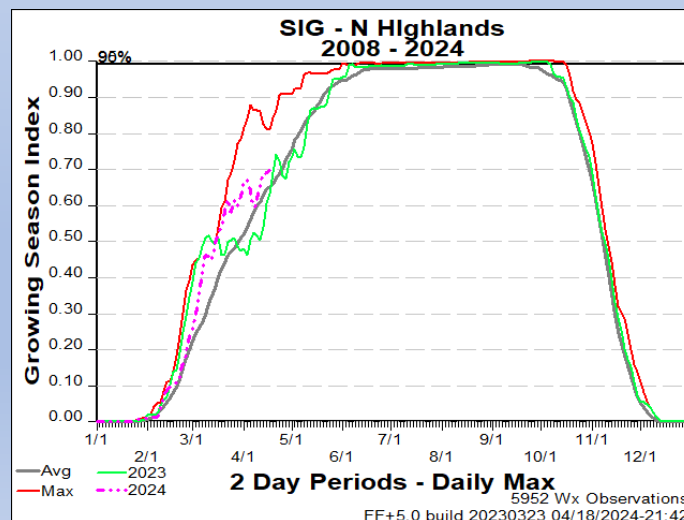
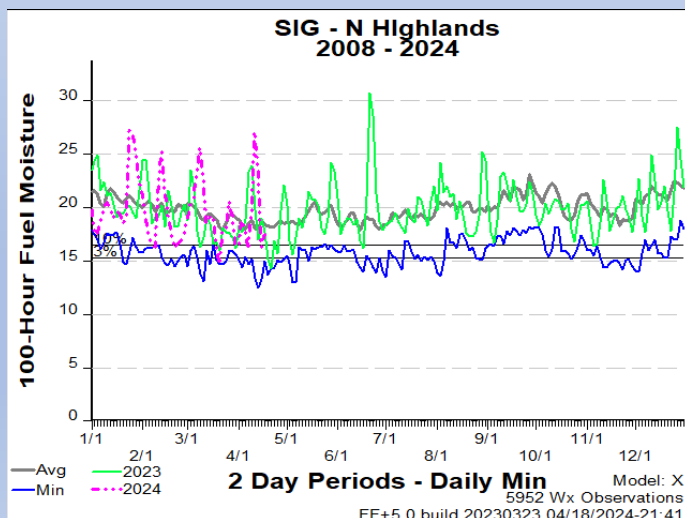
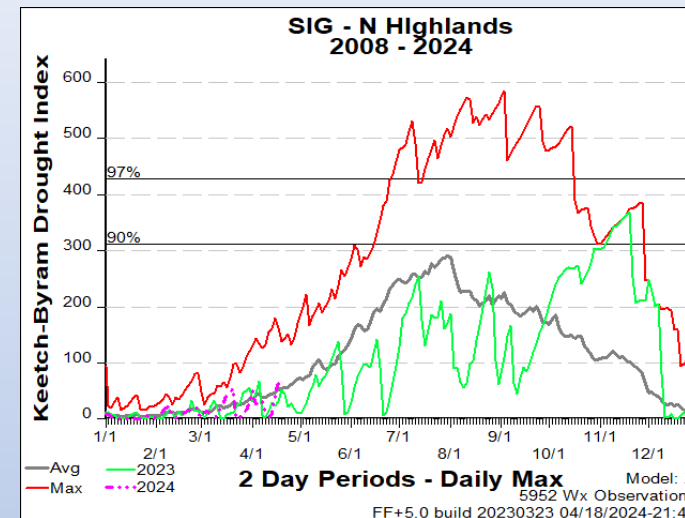
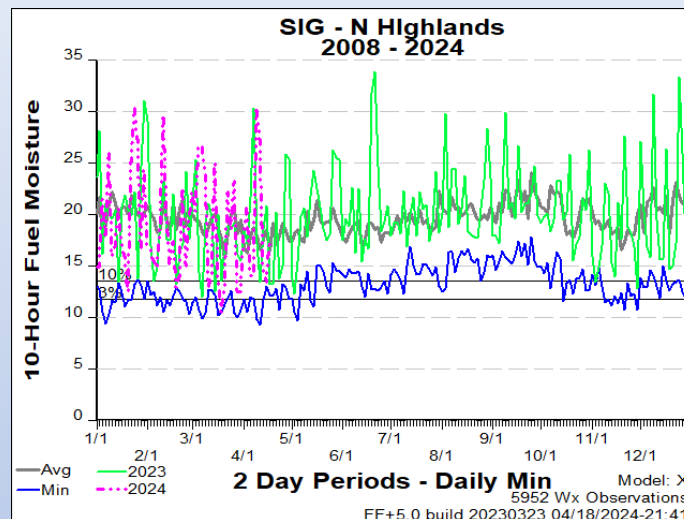
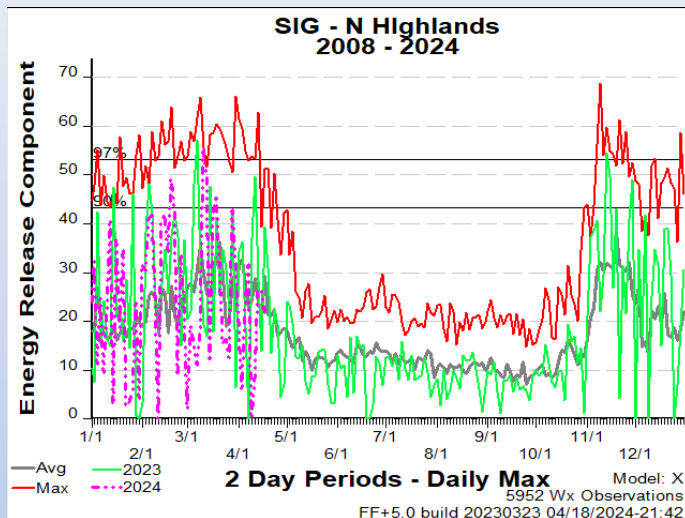
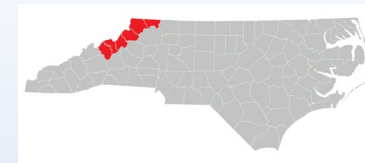
Values in the table above are averages from 3 stations in this FDRA:

- 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

# FDRA – Northern Highlands



## 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	FRI 19-Apr	SAT 20-Apr	SUN 21-Apr	MON 22-Apr	TUE 23-Apr	WED 24-Apr	THU 25-Apr
Avg. Max. Temp. (°F)							
Avg. Min. Humidity (%)							
Avg. 20' Wind Speed (mph)							
Avg. Wind Direction*							
Avg. Probability of Precip. (%)							
Days Since a Wetting Rain**							
Forecast ERC (Fuel Model X)	24.3	17.2	20.7	19.3	19.6	18.8	18.9
Forecast BI (Fuel Model X)	40.1	38.9	37.1	37.5	43.6	42.2	39.2
Forecast IC (Fuel Model X)	7.4	4.9	4.6	4.3	5.5	5.7	5.1
Forecast 100-Hr. FMC	16.9	16.6	16.7	16.3	15.9	15.7	15.2
Forecast 1000-Hr. FMC	22.5	22.3	22.1	21.9	21.7	21.5	21.3
KBDI	80.0						

The top six fields on the Weekly Outlook tool are not populated due to an on-going data issue related to the NWS digital forecast API.

#### 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:

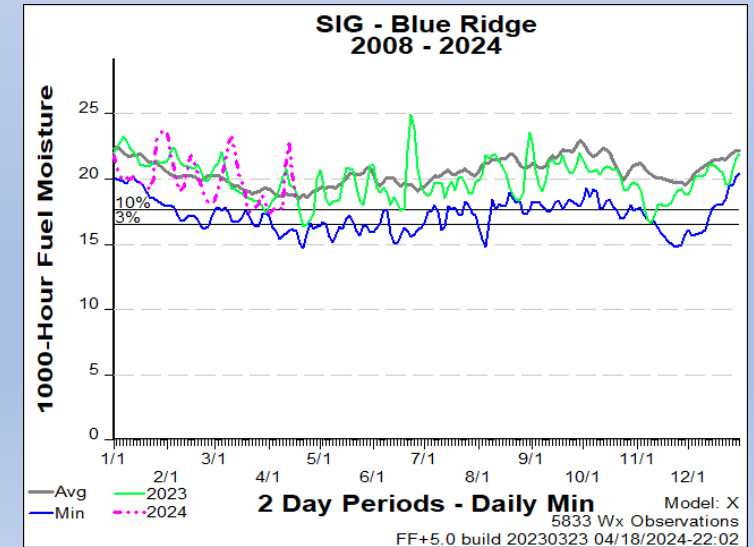
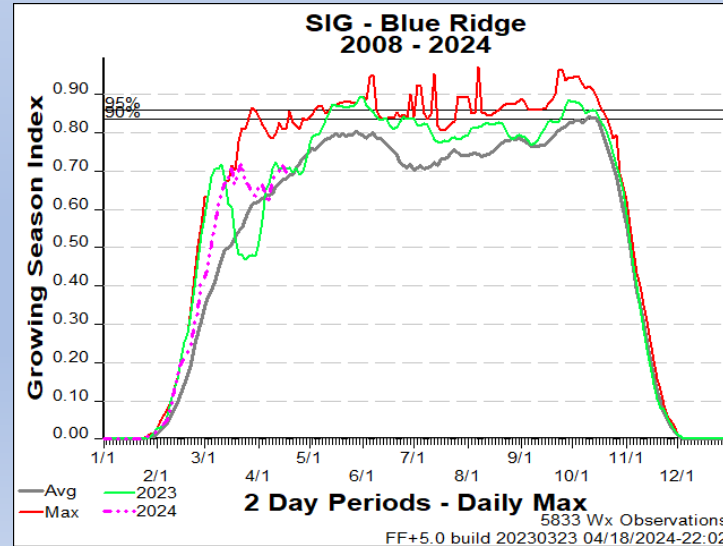
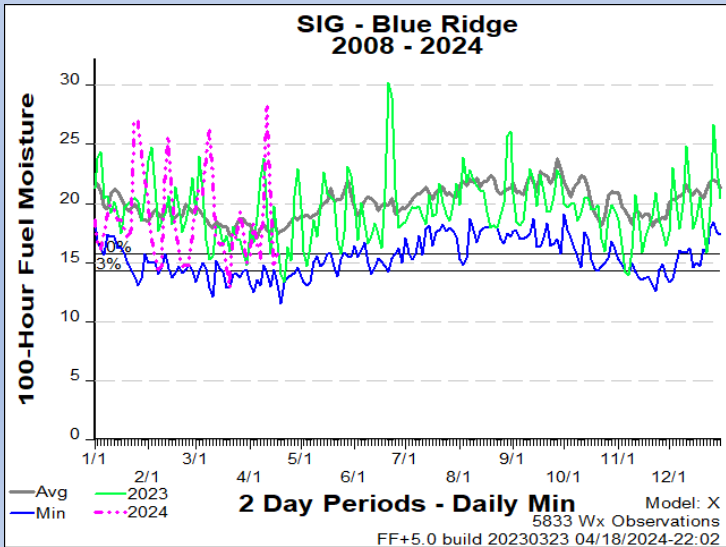
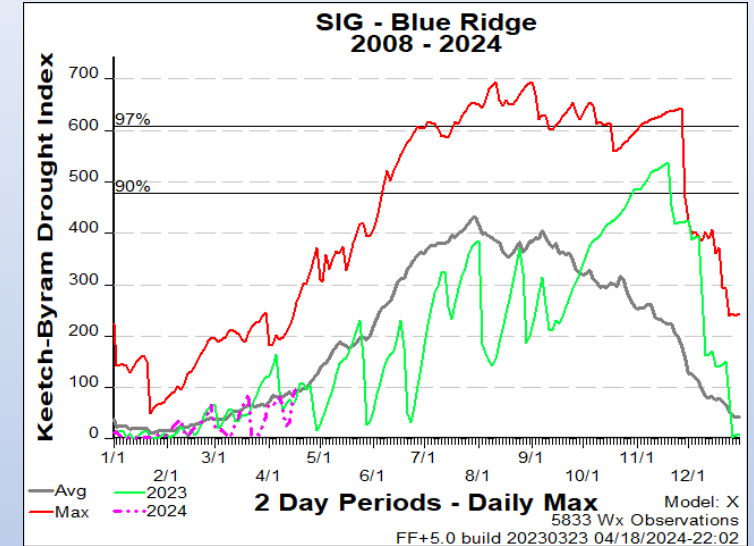
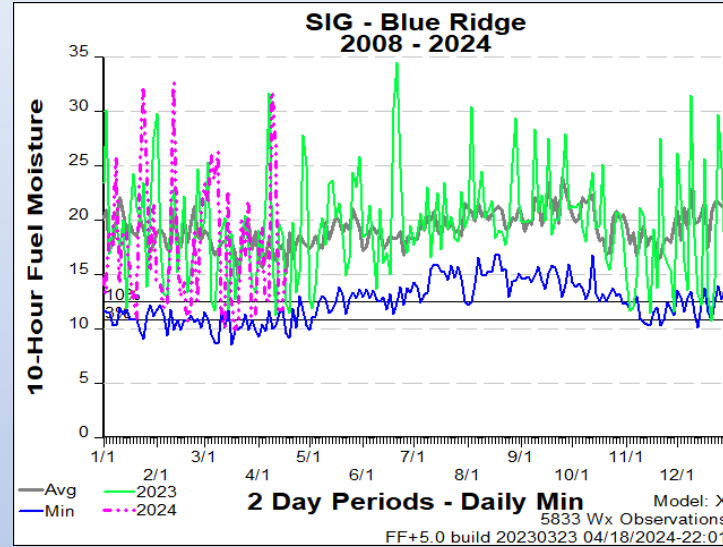
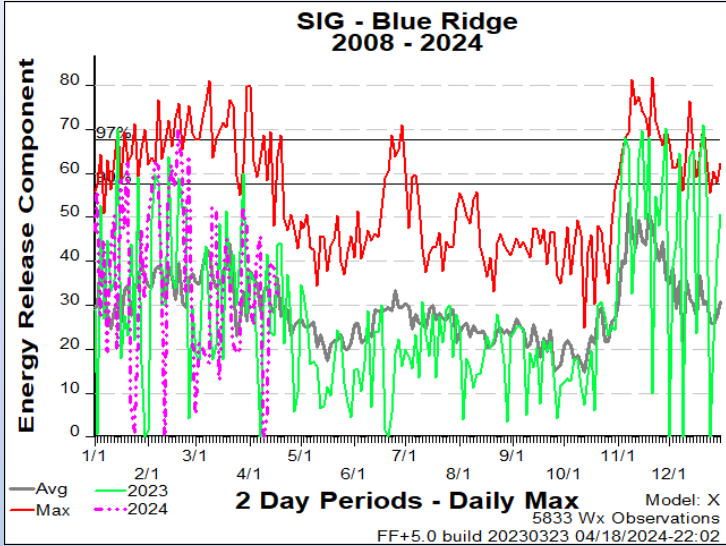
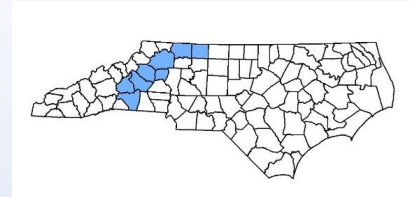
- Laurel Springs (310101)
- Upper Mountain Research Stn (310141)
- Busick (313402)

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



# FDRA – Blue Ridge Escarpment



## 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	FRI 19-Apr	SAT 20-Apr	SUN 21-Apr	MON 22-Apr	TUE 23-Apr	WED 24-Apr	THU 25-Apr
Avg. Max. Temp. (°F)							
Avg. Min. Humidity (%)							
Avg. 20' Wind Speed (mph)							
Avg. Wind Direction*							
Avg. Probability of Precip. (%)							
Days Since a Wetting Rain**							
Forecast ERC (Fuel Model X)	34.5	27.3	30.5	26.4	25.8	26.1	28.9
Forecast BI (Fuel Model X)	59.9	57.4	53.7	57.0	63.6	61.6	63.7
Forecast IC (Fuel Model X)	9.4	7.2	6.5	6.6	7.9	8.5	8.8
Forecast 100-Hr. FMC	14.9	15.6	15.7	15.2	14.9	14.9	14.8
Forecast 1000-Hr. FMC	17.3	17.2	17.0	16.8	16.6	16.5	16.4
KBDI	121.0						

The top six fields on the Weekly Outlook tool are not populated due to an on-going data issue related to the NWS digital forecast API.

**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

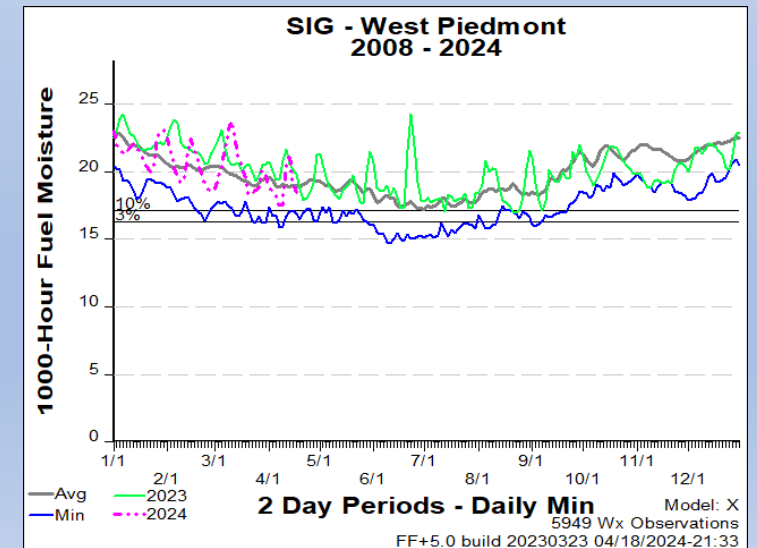
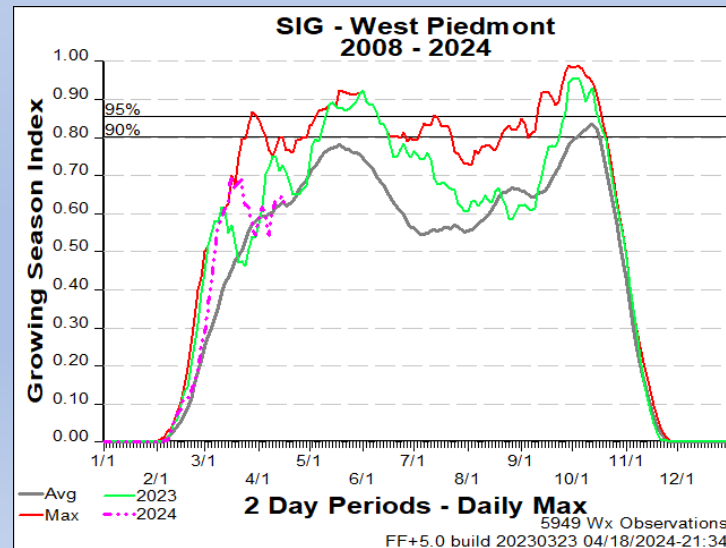
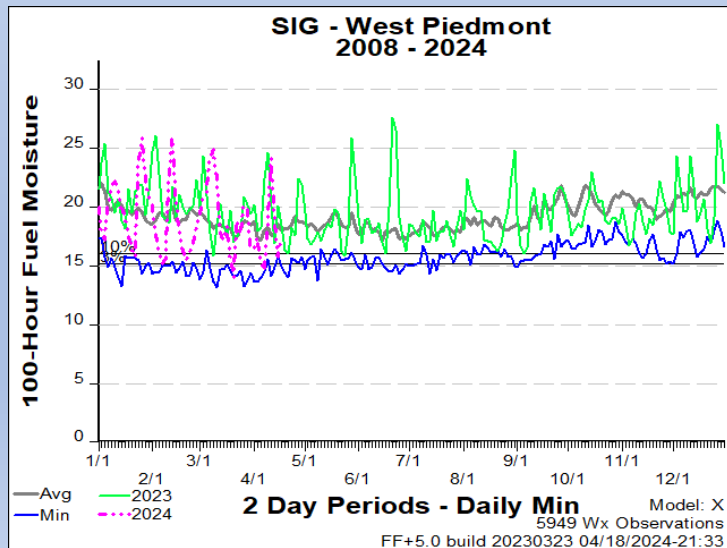
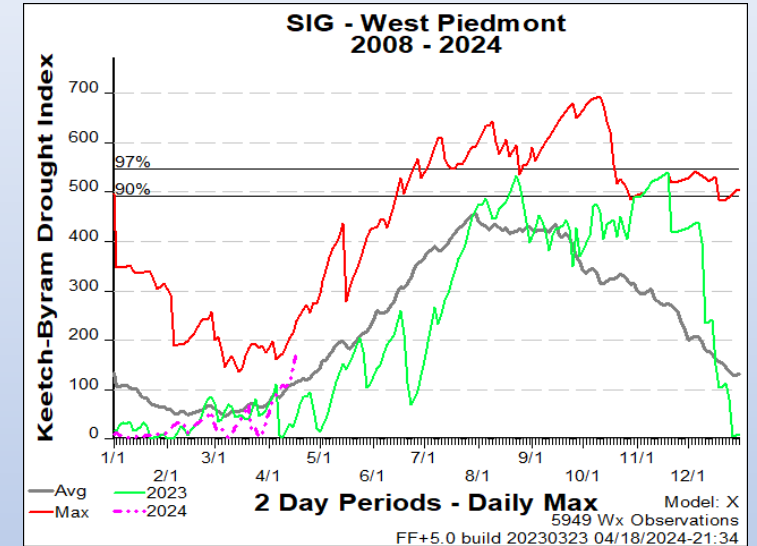
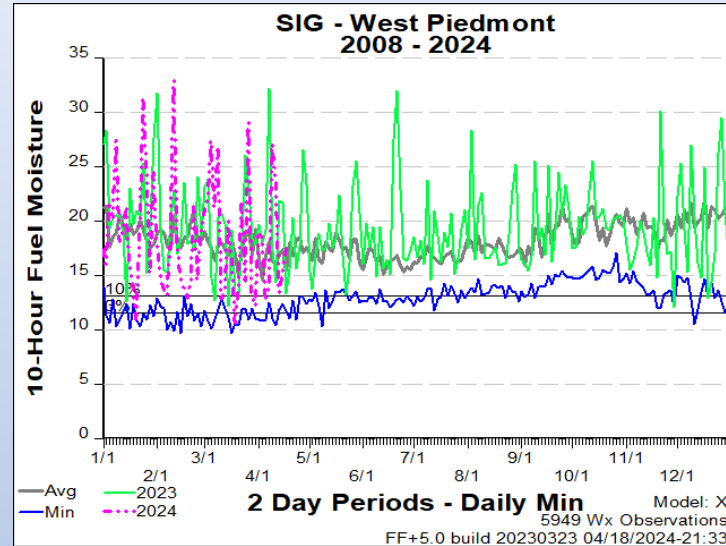
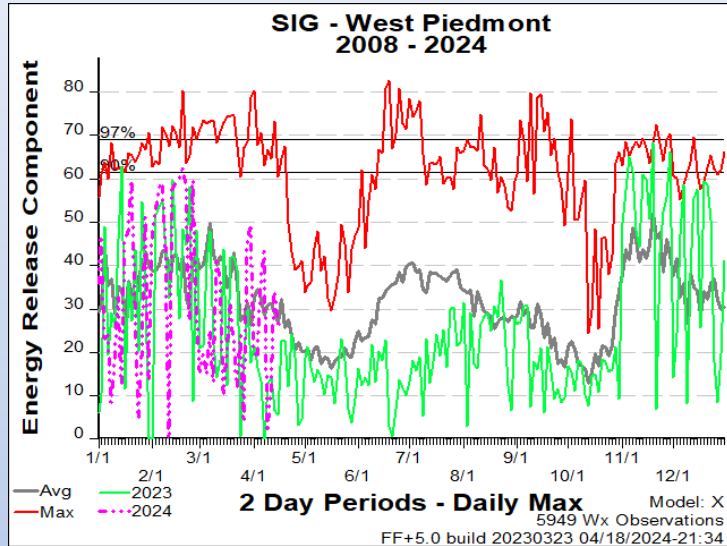
Values in the table above are averages from 3 stations in this FDRA:

- 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



## 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	FRI 19-Apr	SAT 20-Apr	SUN 21-Apr	MON 22-Apr	TUE 23-Apr	WED 24-Apr	THU 25-Apr
Avg. Max. Temp. (°F)							
Avg. Min. Humidity (%)							
Avg. 20' Wind Speed (mph)							
Avg. Wind Direction*							
Avg. Probability of Precip. (%)							
Days Since a Wetting Rain**							
Forecast ERC (Fuel Model X)	26.2	19.2	26.5	17.8	17.1	19.4	22.4
Forecast BI (Fuel Model X)	44.9	40.2	50.7	32.4	32.3	41.5	41.6
Forecast IC (Fuel Model X)	7.1	5.1	6.9	3.7	4.0	6.7	6.9
Forecast 100-Hr. FMC	16.9	17.0	16.8	16.7	16.6	16.9	16.7
Forecast 1000-Hr. FMC	21.2	20.9	20.8	20.6	20.5	20.3	20.2
KBDI	176.3						

The top six fields on the Weekly Outlook tool are not populated due to an on-going data issue related to the NWS digital forecast API.

#### 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

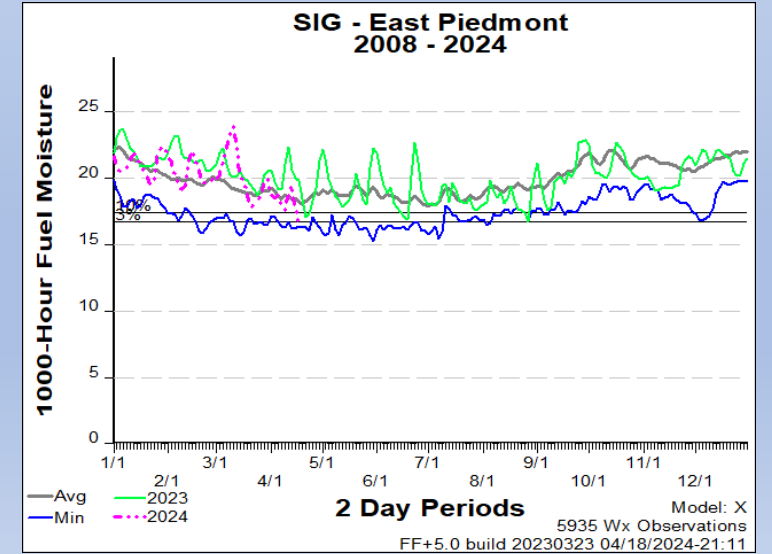
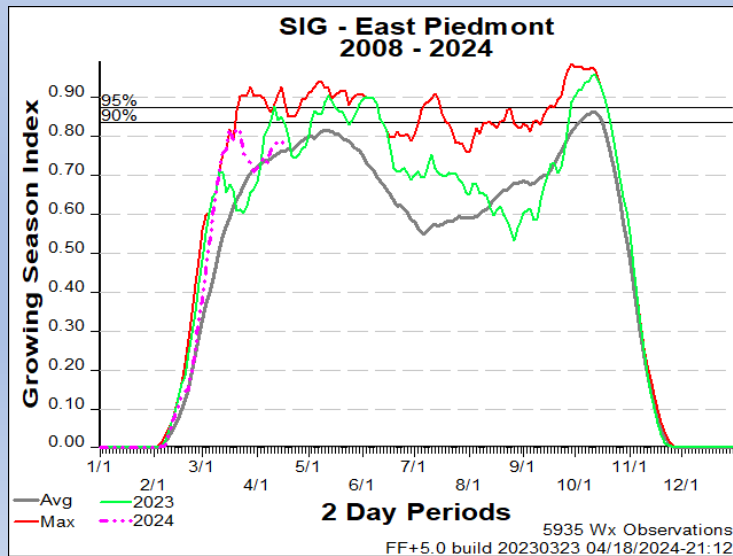
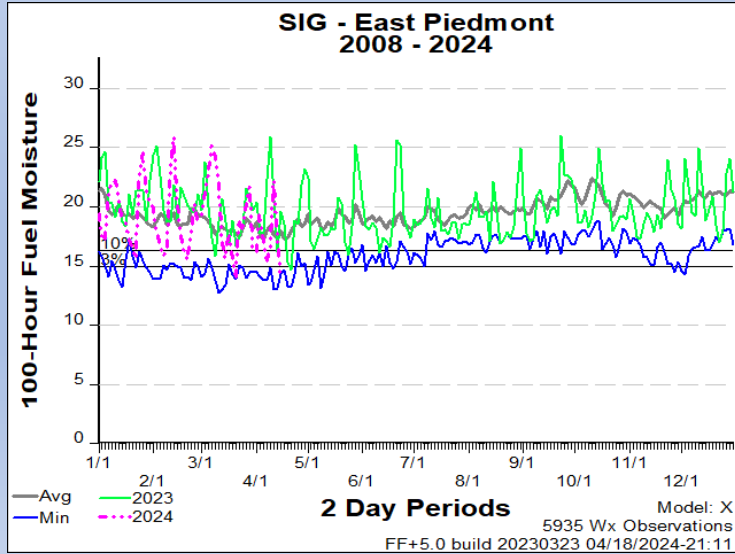
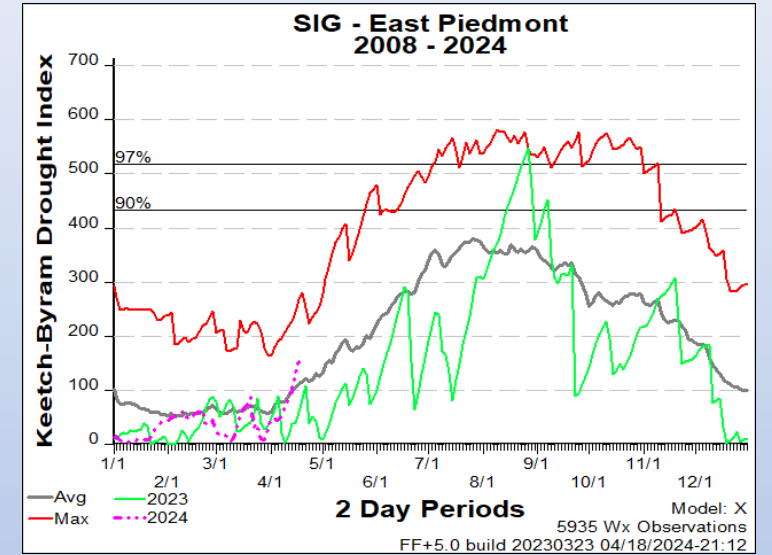
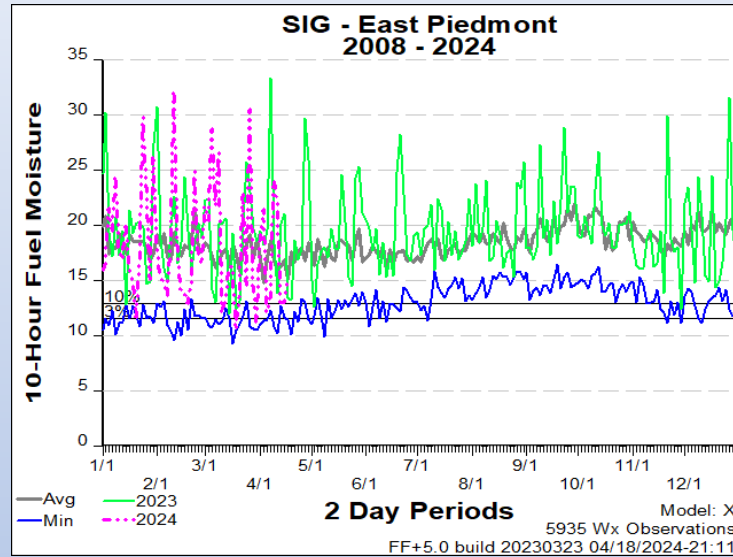
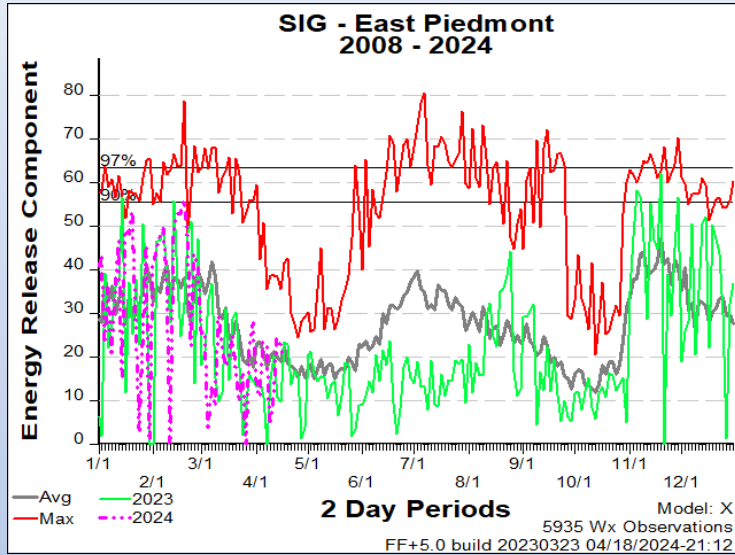
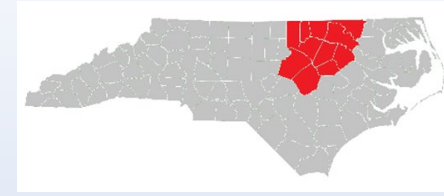
Values in the table above are averages from 3 stations in this FDRA:

- 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	FRI 19-Apr	SAT 20-Apr	SUN 21-Apr	MON 22-Apr	TUE 23-Apr	WED 24-Apr	THU 25-Apr
Avg. Max. Temp. (°F)							
Avg. Min. Humidity (%)							
Avg. 20' Wind Speed (mph)							
Avg. Wind Direction*							
Avg. Probability of Precip. (%)							
Days Since a Wetting Rain**							
Forecast ERC (Fuel Model X)	17.3	14.3	20.3	13.0	14.8	16.8	18.9
Forecast BI (Fuel Model X)	25.1	27.2	33.1	22.9	21.8	34.2	35.6
Forecast IC (Fuel Model X)	3.8	2.9	4.4	2.0	2.6	5.4	5.4
Forecast 100-Hr. FMC	15.7	16.6	16.8	16.7	17.2	17.5	17.3
Forecast 1000-Hr. FMC	19.7	19.5	19.4	19.4	19.4	19.3	19.2
KBDI	158.8						

The top six fields on the Weekly Outlook tool are not populated due to an on-going data issue related to the NWS digital forecast API.

#### 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.

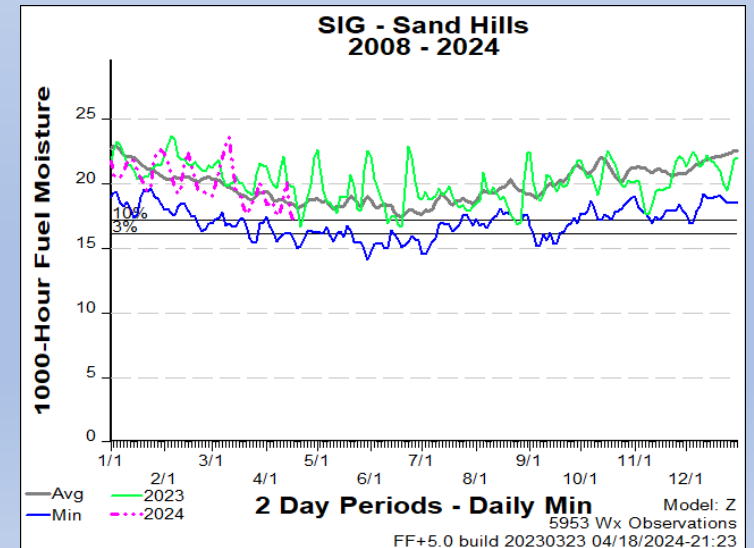
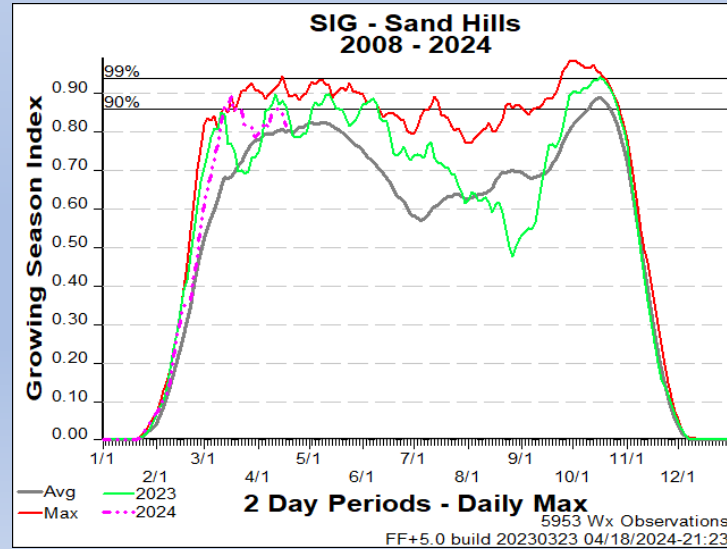
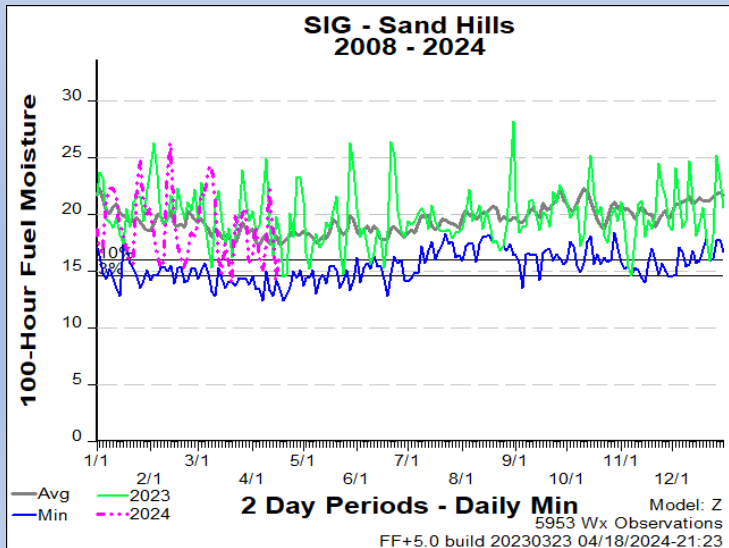
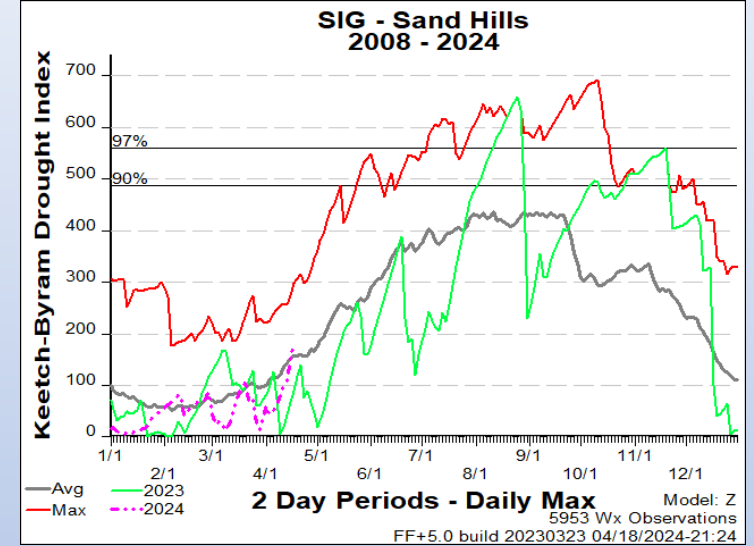
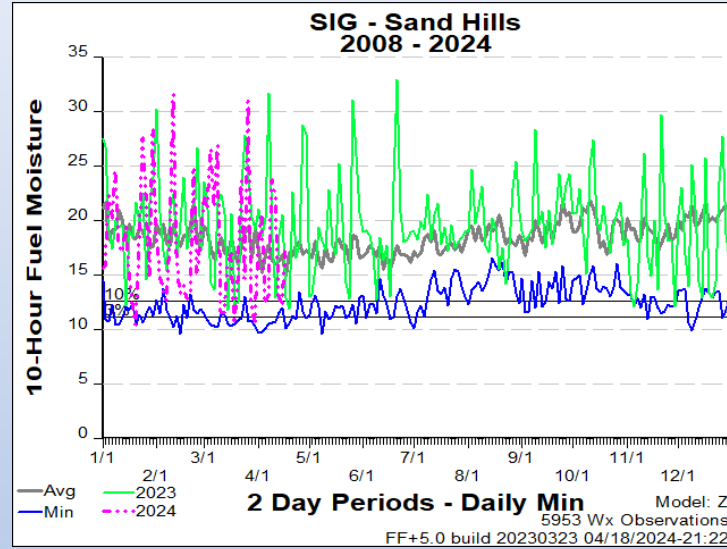
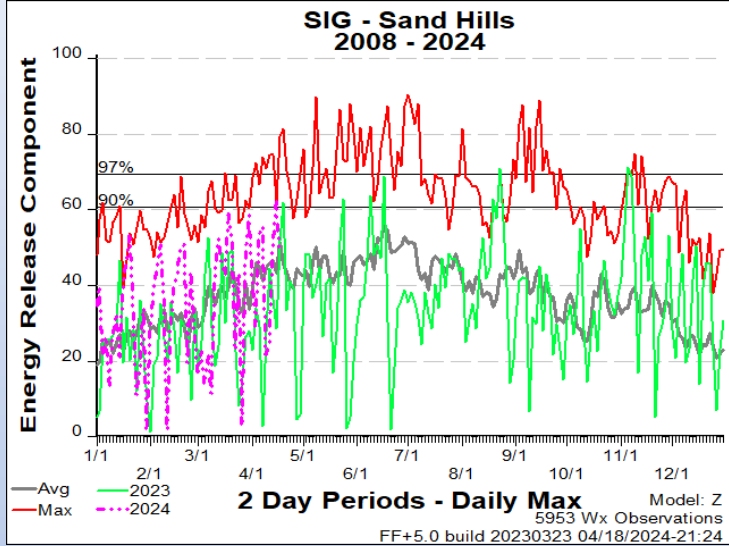
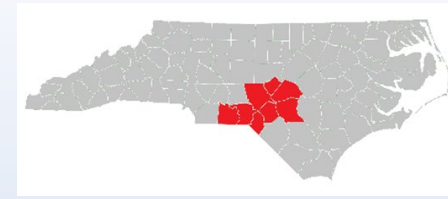
Values in the table above are averages from 4 stations in this FDRA:

- 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	FRI 19-Apr	SAT 20-Apr	SUN 21-Apr	MON 22-Apr	TUE 23-Apr	WED 24-Apr	THU 25-Apr
Avg. Max. Temp. (°F)							
Avg. Min. Humidity (%)							
Avg. 20' Wind Speed (mph)							
Avg. Wind Direction*							
Avg. Probability of Precip. (%)							
Days Since a Wetting Rain**							
Forecast ERC (Fuel Model Z)	44.3	36.8	49.4	29.6	35.2	38.9	45.8
Forecast BI (Fuel Model Z)	38.0	37.6	52.7	30.2	29.3	46.7	52.8
Forecast IC (Fuel Model Z)	12.0	7.2	12.2	4.4	5.4	12.3	13.8
Forecast 100-Hr. FMC	16.5	17.0	16.9	17.5	18.7	18.7	17.8
Forecast 1000-Hr. FMC	20.3	20.1	20.0	20.0	20.0	19.8	19.8
KBDI	185.7						

The top six fields on the Weekly Outlook tool are not populated due to an on-going data issue related to the NWS digital forecast API.

#### 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:

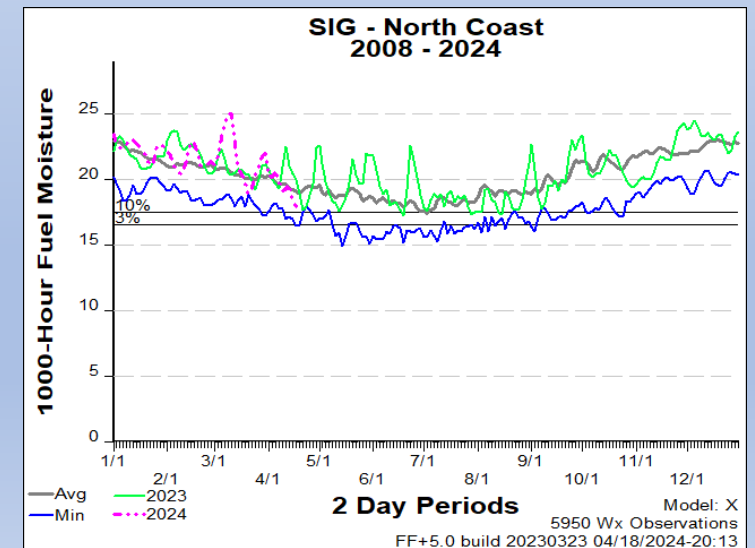
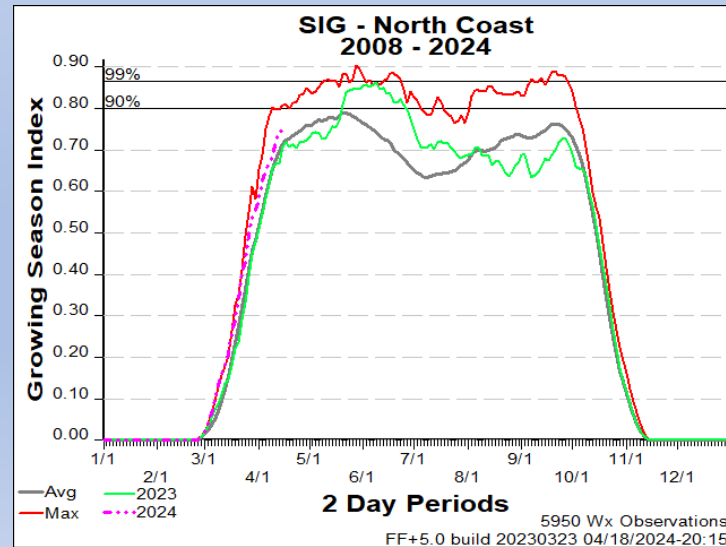
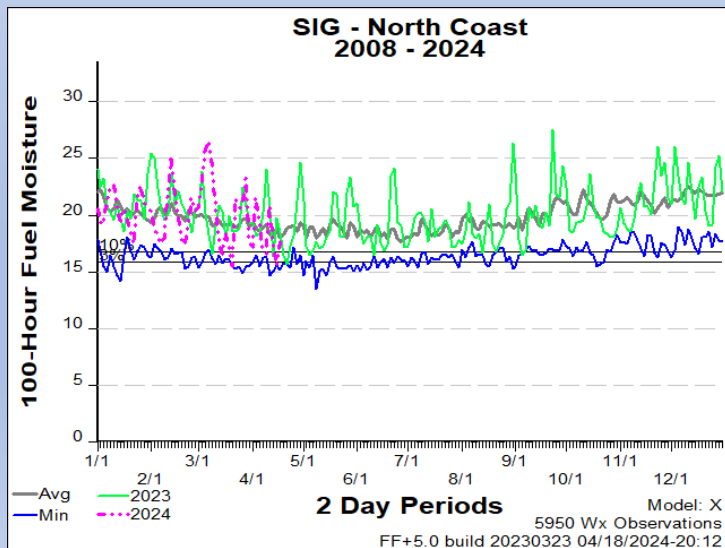
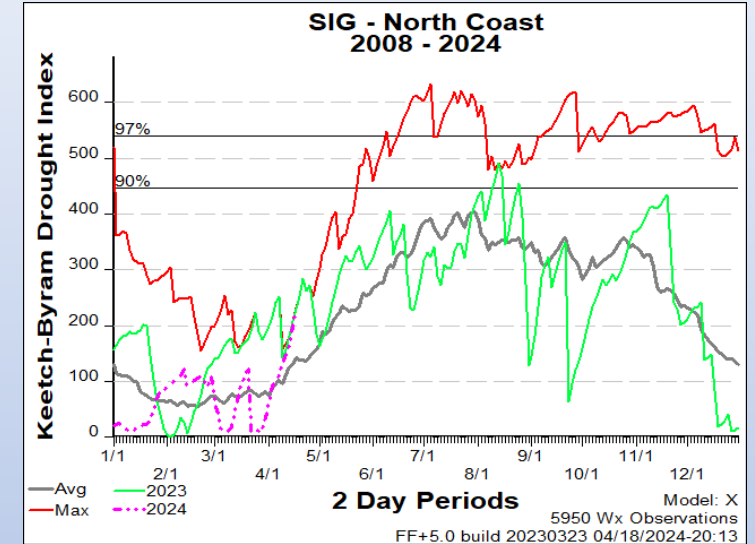
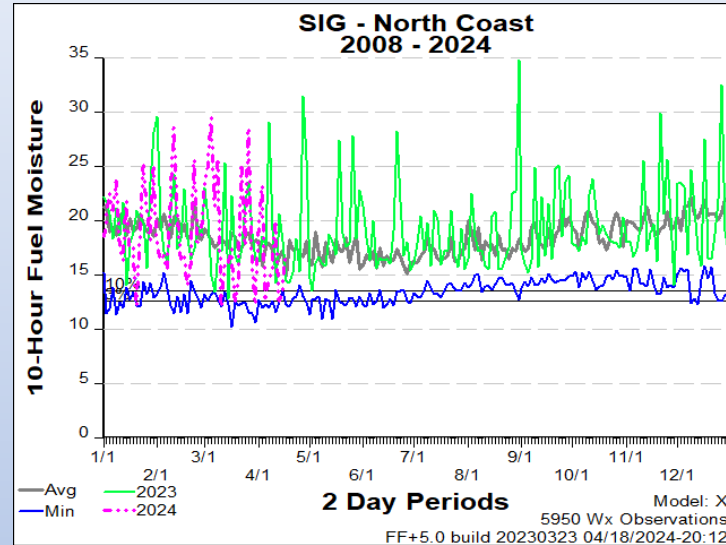
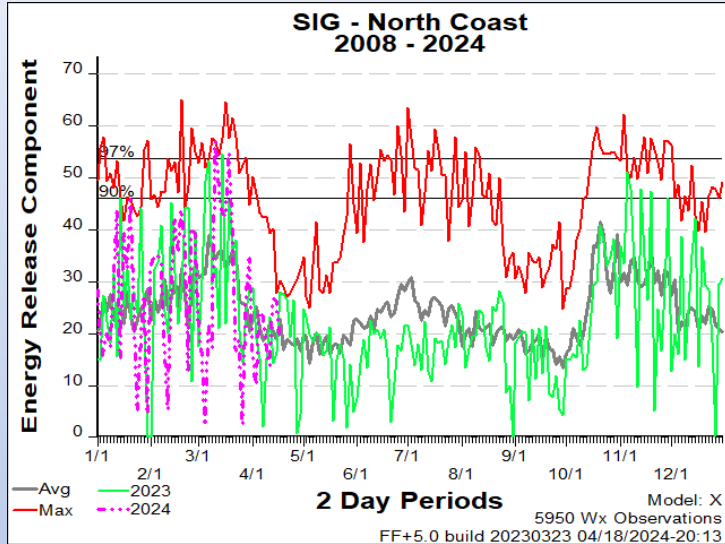
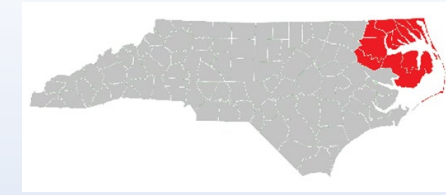
- Sandhills Research Station (317040)
- Rockingham (318202)
- Fort Liberty (318503)

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



## 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	FRI 19-Apr	SAT 20-Apr	SUN 21-Apr	MON 22-Apr	TUE 23-Apr	WED 24-Apr	THU 25-Apr
Avg. Max. Temp. (°F)							
Avg. Min. Humidity (%)							
Avg. 20' Wind Speed (mph)							
Avg. Wind Direction*							
Avg. Probability of Precip. (%)							
Days Since a Wetting Rain**							
Forecast ERC (Fuel Model X)	17.6	13.4	14.8	12.4	14.8	16.1	17.6
Forecast BI (Fuel Model X)	24.1	22.6	25.3	26.1	22.7	30.7	28.1
Forecast IC (Fuel Model X)	3.1	1.9	2.3	2.1	2.4	4.1	3.6
Forecast 100-Hr. FMC	17.8	17.9	18.3	18.7	19.0	18.9	18.4
Forecast 1000-Hr. FMC	20.8	20.7	20.6	20.7	20.7	20.6	20.6
KBDI	233.8						

The top six fields on the Weekly Outlook tool are not populated due to an on-going data issue related to the NWS digital forecast API.

#### 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.

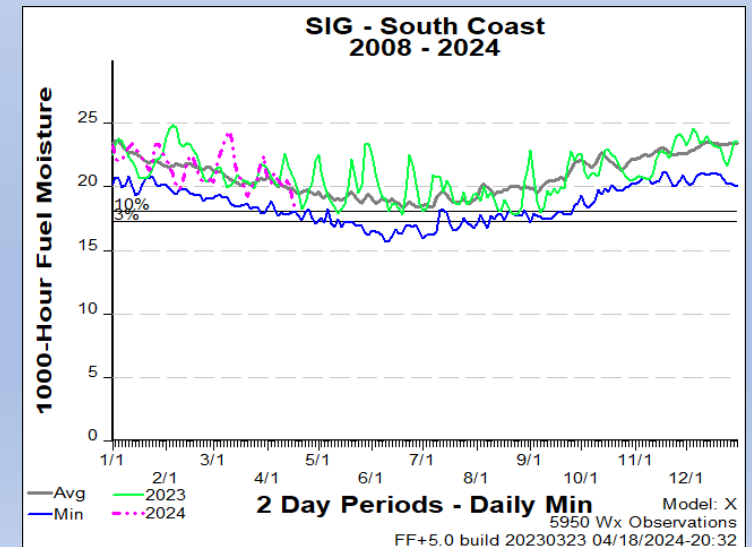
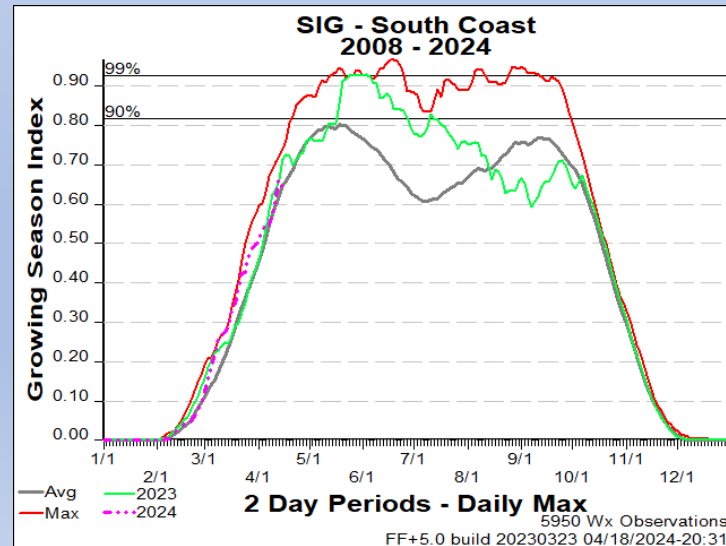
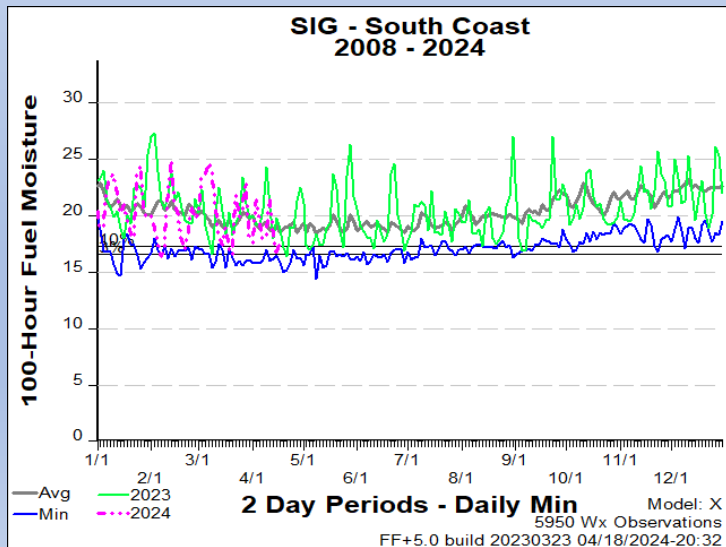
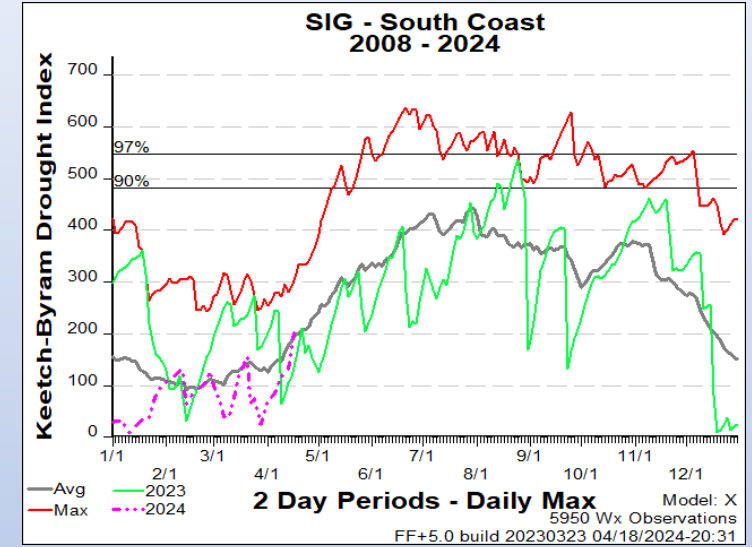
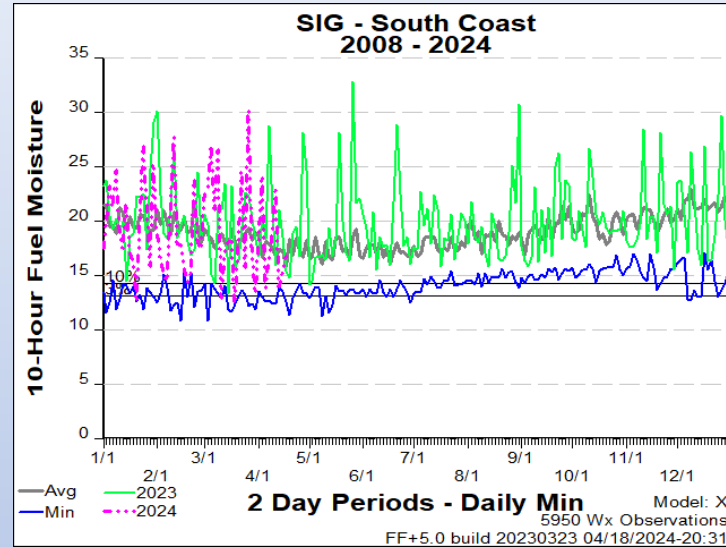
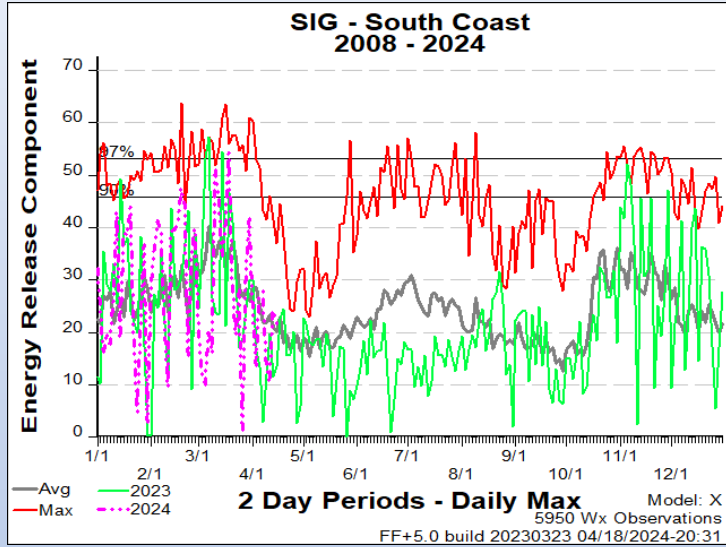
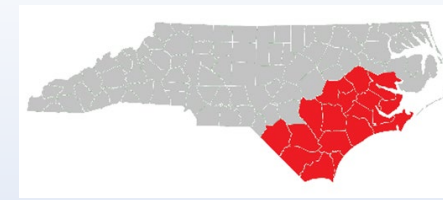
Values in the table above are averages from 4 stations in this FDRA:

- 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	FRI 19-Apr	SAT 20-Apr	SUN 21-Apr	MON 22-Apr	TUE 23-Apr	WED 24-Apr	THU 25-Apr
Avg. Max. Temp. (°F)							
Avg. Min. Humidity (%)							
Avg. 20' Wind Speed (mph)							
Avg. Wind Direction*							
Avg. Probability of Precip. (%)							
Days Since a Wetting Rain**							
Forecast ERC (Fuel Model X)	18.6	14.2	14.8	10.1	15.5	15.7	17.8
Forecast BI (Fuel Model X)	32.2	24.1	29.0	23.0	23.4	30.3	30.2
Forecast IC (Fuel Model X)	4.8	2.5	2.9	2.0	2.9	4.3	4.5
Forecast 100-Hr. FMC	17.3	17.6	17.9	18.9	19.9	19.4	18.6
Forecast 1000-Hr. FMC	21.3	21.0	20.9	21.1	21.1	20.9	20.9
KBDI	214.1						

The top six fields on the Weekly Outlook tool are not populated due to an on-going data issue related to the NWS digital forecast API.

#### 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

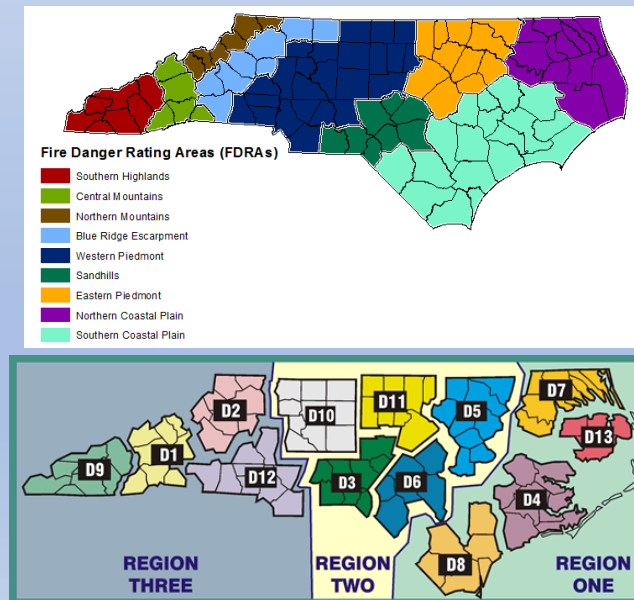
Other factors to consider when determining fire danger: sky conditions, precipitation amount, number of days since rain, and season

# Outlook Summary Tables – Organized by Region –

Summary Table by FDRA using count of colored blocks in a day's forecast.

Key: 4+ Red Blocks on a Day = "Critical" Day Potential; Red Color  
4+ Yellow or Combo of Yellow/Red = "High" Day Potential; Yellow Color  
6+ Blue-Green Blocks = "Low to Mod" Potential Day; Blue-green Color

These summary tables provide a generalization applied across the FDRA, based upon daily weather and NFDRS forecasts projected through seven days. Forecasts and resulting outputs will change significantly over time & also depend upon actual precip amount/duration. Local factors should also be considered.



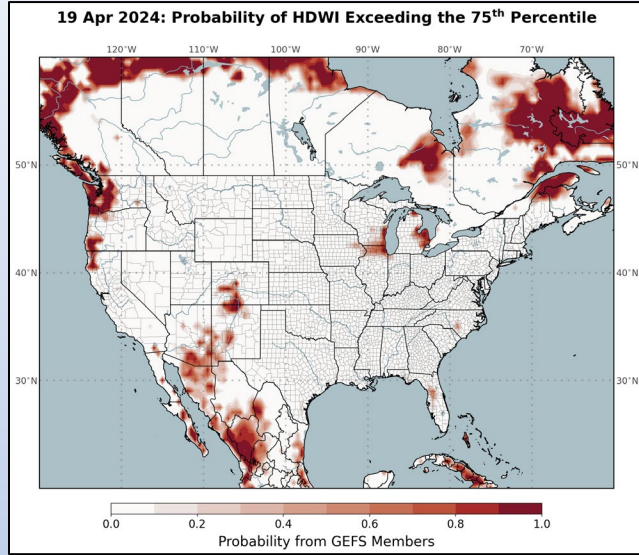
The Weekly Outlook Tool located on the FWIP is utilized to generate the regional summary tables normally located here. These tables are not able to be generated at this time due to issues (not related to local factors) regarding availability of the NWS digital forecast API used to populate the weather values.

**\*The NFDRS outputs & forecast values are correct and unimpacted, as they come from a different location.**

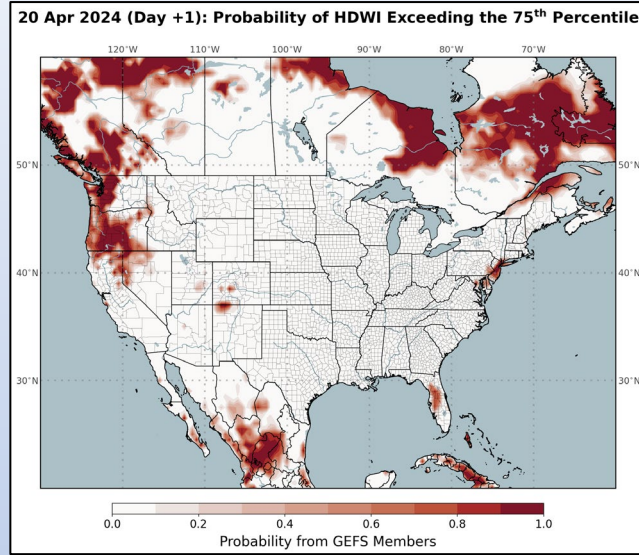
# Statewide Slides

# Hot-Dry-Windy Index (HDW)

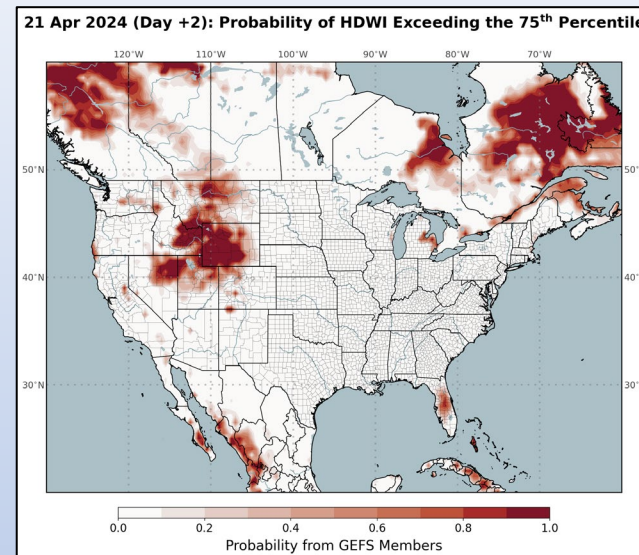
Friday > 75<sup>th</sup> Percentile



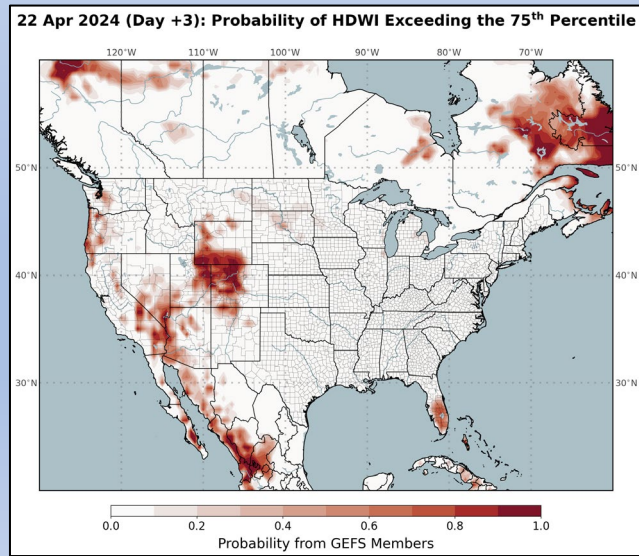
Saturday > 75<sup>th</sup> Percentile



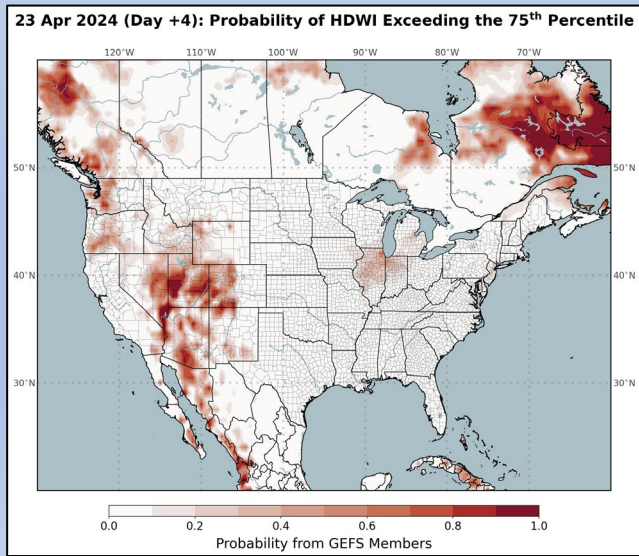
Sunday > 75<sup>th</sup> Percentile



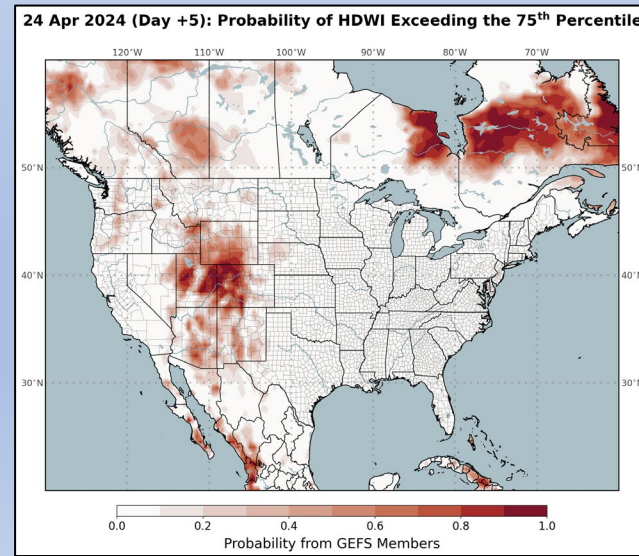
Monday > 75<sup>th</sup> Percentile



Tuesday > 75<sup>th</sup> Percentile

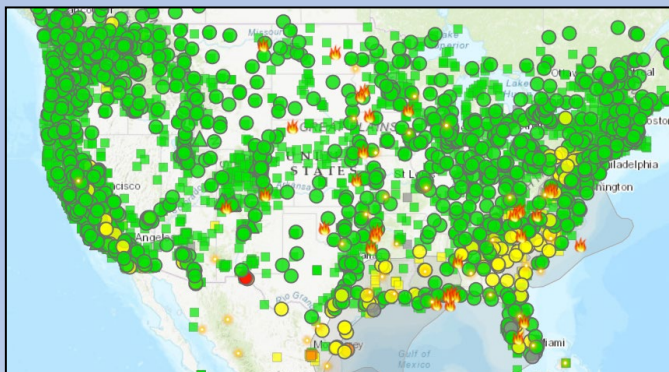
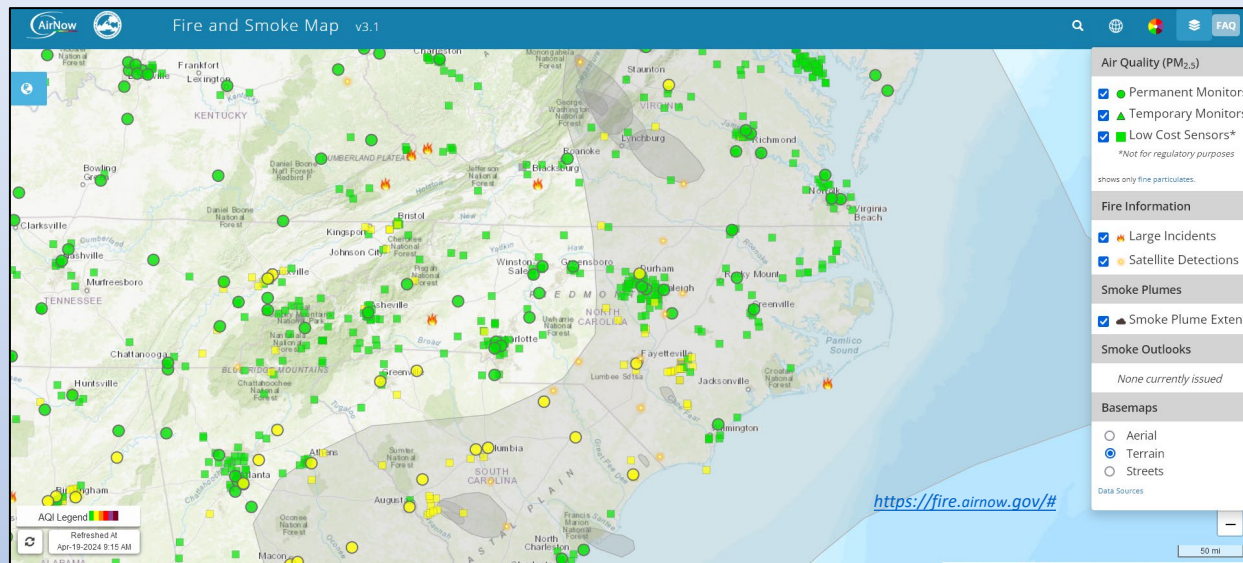


Wednesday > 75<sup>th</sup> Percentile



- 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**

# Air Quality Notes

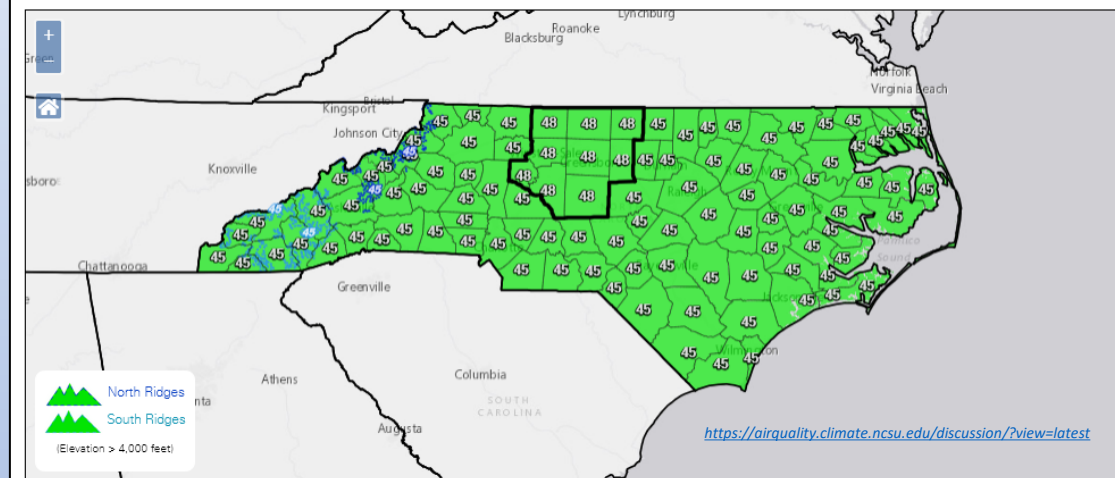


## Extended Air Quality Outlook

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

Forecast Day	AQI Range	Category Range	Download KML
<a href="#">Friday (Apr 19)</a>	50	Green	<a href="#">download</a>
<a href="#">Saturday (Apr 20)</a>	45	Green	<a href="#">download</a>
<a href="#">Sunday (Apr 21)</a>	33	Green	<a href="#">download</a>
<a href="#">Monday (Apr 22)</a>	45	Green	<a href="#">download</a>

## Maximum Air Quality Index for Apr 20, 2024



## NDAQ Forecaster Discussion (Friday - PM)

### General Forecast Discussion

Tomorrow, a strong blast of dry, cool and clean air will move in behind a cold front and air quality levels should lower well back into the Code Green range.

### Outlook

Through Monday, strong Canadian high pressure building across the Plains and eventually the Deep South will continue to advect a cool, dry and clean air mass into the region. Air quality levels are expected to remain in the Code Green range through the period.

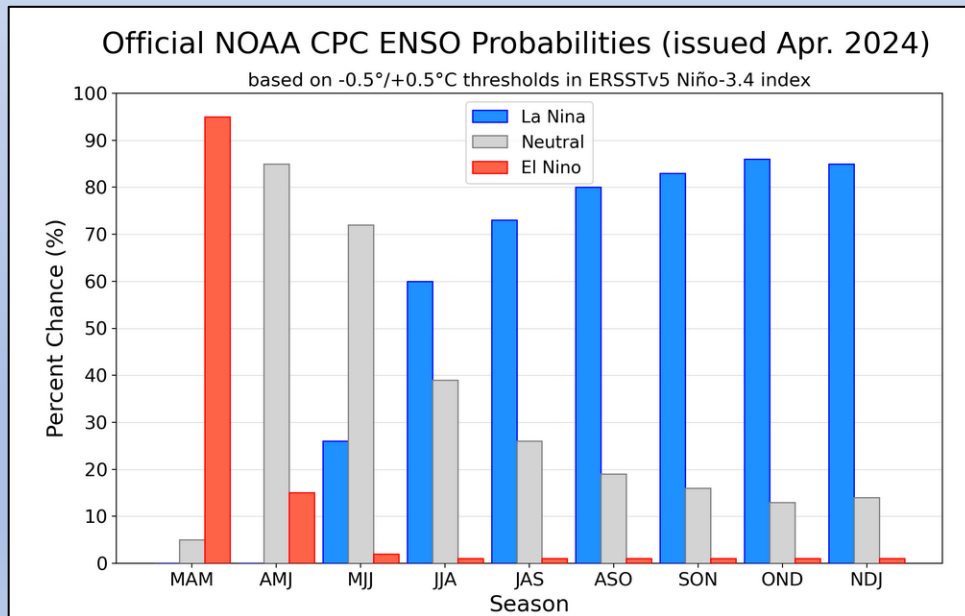


# ENSO Notes from the CPC (4/15/24 Update)

ENSO Alert System Status: [El Niño Advisory](#) / [La Niña Watch](#)

A transition from El Niño to ENSO-neutral is likely by April-June 2024 (85% chance), with the odds of La Niña developing by June-August 2024 (60% chance).

ENSO, or El Niño 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 Niña, NC has drier than normal conditions and can have more fire occurrence. However, La Niña also can lead to more tropical activity. El Niño, 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 Niña, the departure from average SST must be at least  $-0.5^{\circ}\text{C}$  (line shown in green) for 3 consecutive months. For El Niño, the departure must be at least  $0.5^{\circ}\text{C}$  above average for 3 consecutive months.



## Historical El Niño and La Niña Episodes Based on the ONI computed using ERSST.v5

Recent Pacific warm (red) and cold (blue) periods based on a threshold of  $\pm 0.5^{\circ}\text{C}$  for the Oceanic Niño Index (ONI) [3 month running mean of ERSST.v5 SST anomalies in the Niño 3.4 region (5N-5S, 120-170W)]. For historical purposes, periods of below and above normal SSTs are colored in blue and red when the threshold is met for a minimum of 5 consecutive over-lapping seasons.

The ONI is one measure of the El Niño-Southern Oscillation, and other indices can confirm whether features consistent with a coupled ocean-atmosphere phenomenon accompanied these periods. The complete table going back to DJF 1950 can be found [here](#).

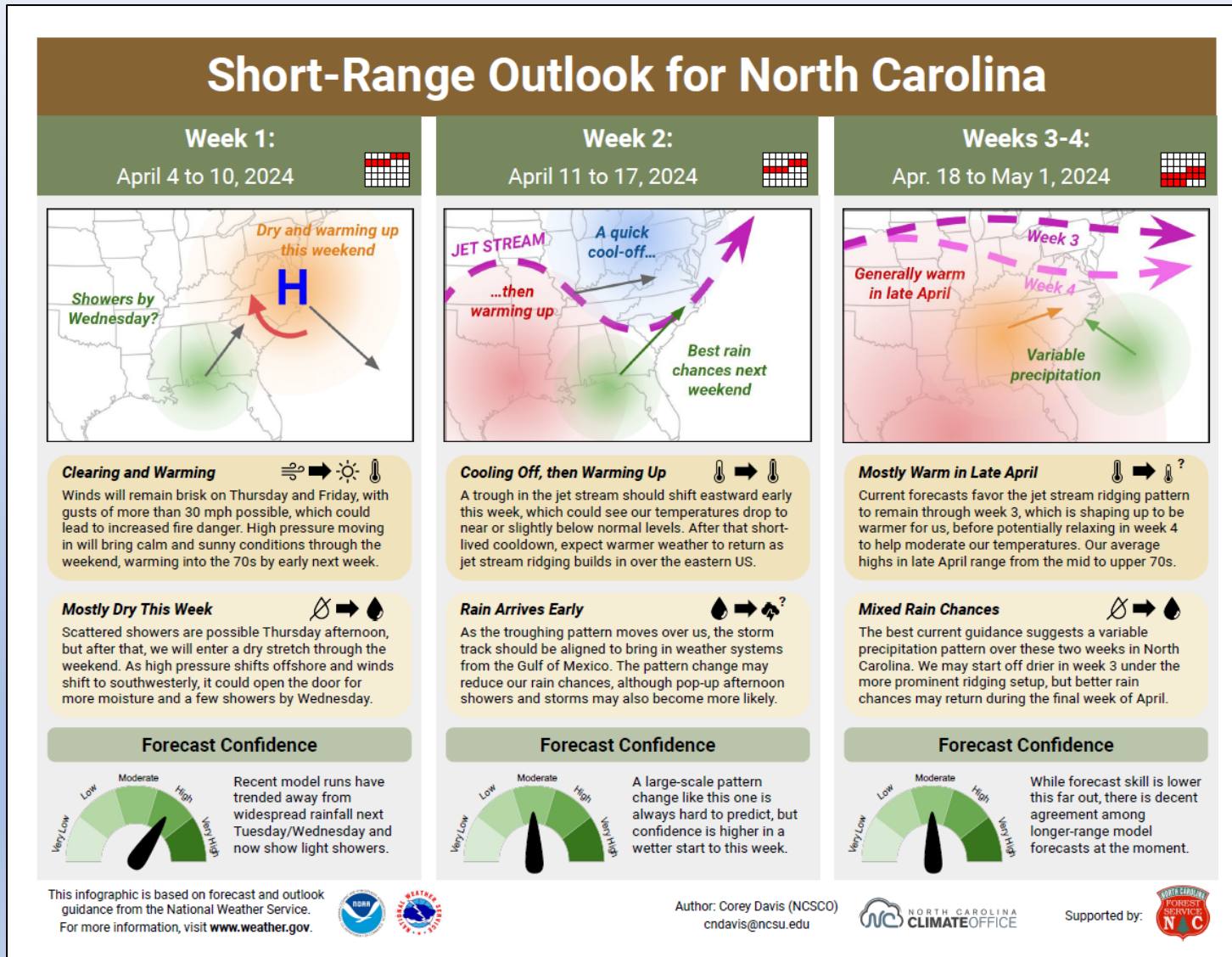
Year	DJF	JFM	FMA	MAM	AMJ	MJJ	JJA	JAS	ASO	SON	OND	NDJ
2012	-0.9	-0.7	-0.6	-0.5	-0.3	0.0	0.2	0.4	0.4	0.3	0.1	-0.2
2013	-0.4	-0.4	-0.3	-0.3	-0.4	-0.4	-0.4	-0.3	-0.3	-0.2	-0.2	-0.3
2014	-0.4	-0.5	-0.3	0.0	0.2	0.2	0.0	0.1	0.2	0.5	0.6	0.7
2015	0.5	0.5	0.5	0.7	0.9	1.2	1.5	1.9	2.2	2.4	2.6	2.6
2016	2.5	2.1	1.6	0.9	0.4	-0.1	-0.4	-0.5	-0.6	-0.7	-0.7	-0.6
2017	-0.3	-0.2	0.1	0.2	0.3	0.3	0.1	-0.1	-0.4	-0.7	-0.8	-1.0
2018	-0.9	-0.9	-0.7	-0.5	-0.2	0.0	0.1	0.2	0.5	0.8	0.9	0.8
2019	0.7	0.7	0.7	0.7	0.5	0.5	0.3	0.1	0.2	0.3	0.5	0.5
2020	0.5	0.5	0.4	0.2	-0.1	-0.3	-0.4	-0.6	-0.9	-1.2	-1.3	-1.2
2021	-1.0	-0.9	-0.8	-0.7	-0.5	-0.4	-0.4	-0.5	-0.7	-0.8	-1.0	-1.0
2022	-1.0	-0.9	-1.0	-1.1	-1.0	-0.9	-0.8	-0.9	-1.0	-1.0	-0.9	-0.8
2023	-0.7	-0.4	-0.1	0.2	0.5	0.8	1.1	1.3	1.6	1.8	1.9	2.0
2024	1.8	1.5										

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

[The most recent IRI plume indicates a transition to ENSO-neutral during spring 2024, with La Niña potentially developing during late summer 2024 [Fig. 6]. The forecast team continues to favor the dynamical model guidance, which is slightly more accurate than statistical models during this time of year. La Niña tends to follow strong El Niño events, which also provides added confidence in the model guidance favoring La Niña. In summary, a transition from El Niño to ENSO-neutral is likely by April-June 2024 (85% chance), with the odds of La Niña developing by June-August 2024 (60% chance; [Fig. 7]).

# State Climate Office: Short-Range Monthly Outlook for NC

Released 4/4/24 & Location: <https://climate.ncsu.edu/fire/outlooks/>

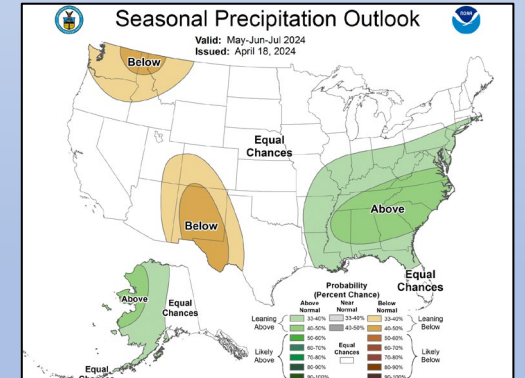
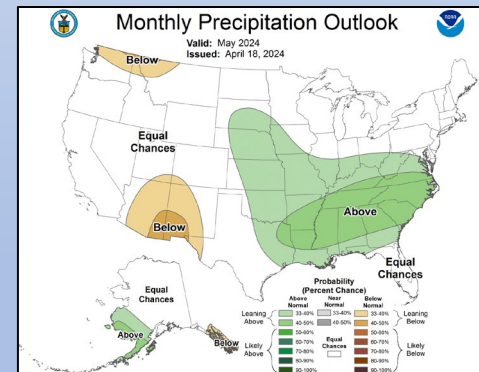
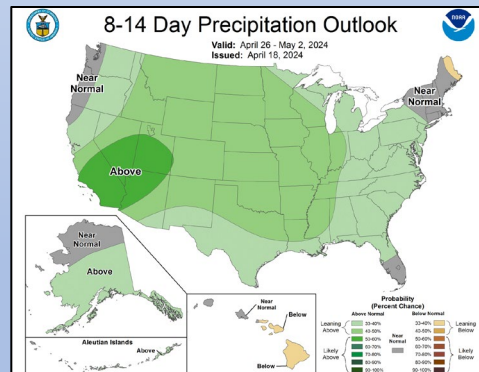
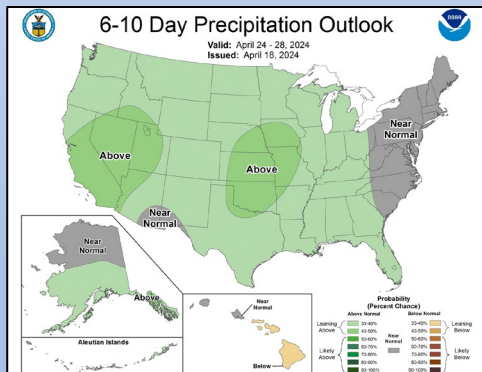
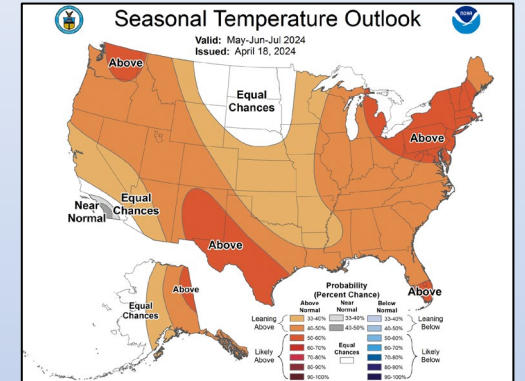
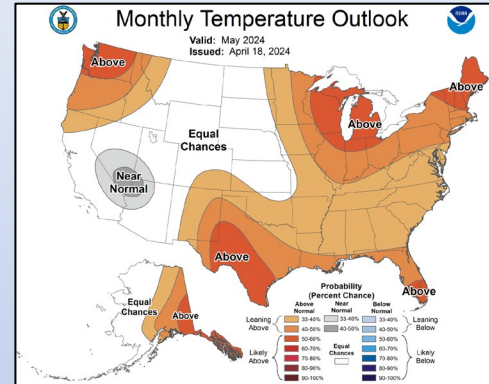
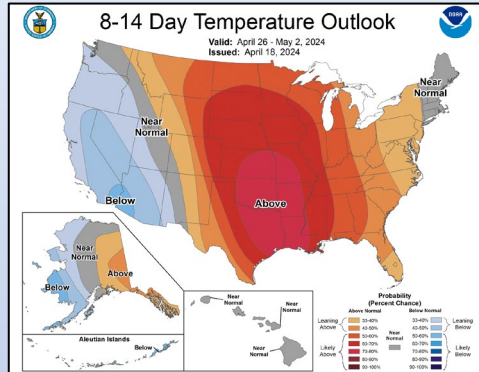
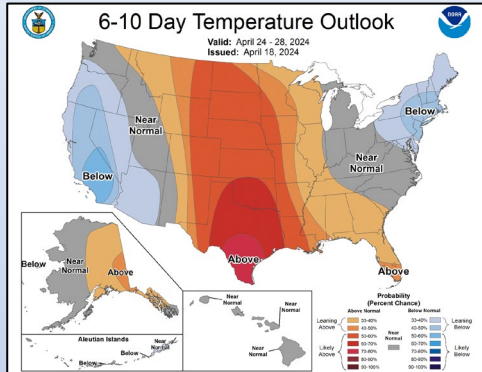


# CPC Temp & Precip Outlook

6-10 Day, 8-14 Day, Next Month, Seasonal

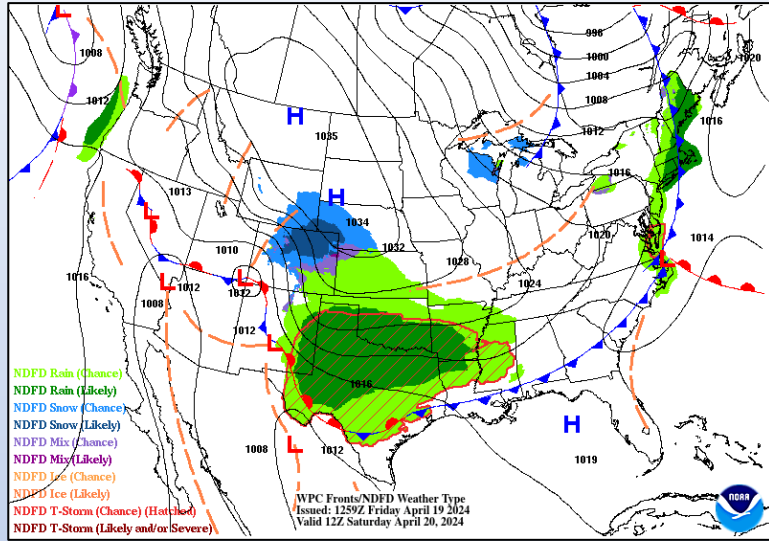
Updated 4/18/24 – [Discussion Link](#)

Updated 4/18/24 – [Discussion Link](#)

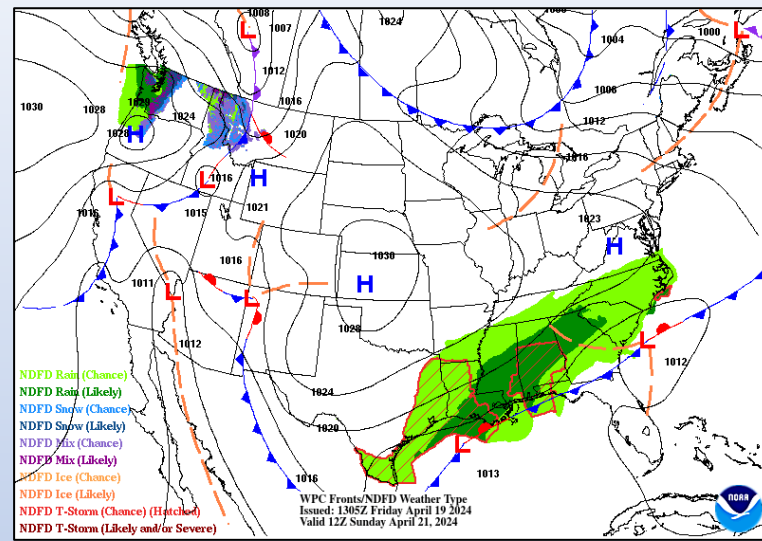


# WPC Forecasted Surface Fronts & Sea-Level Pressures

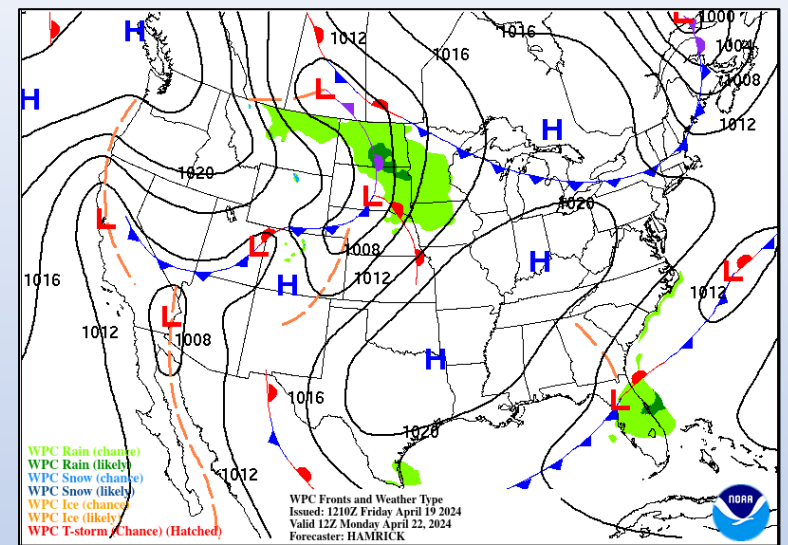
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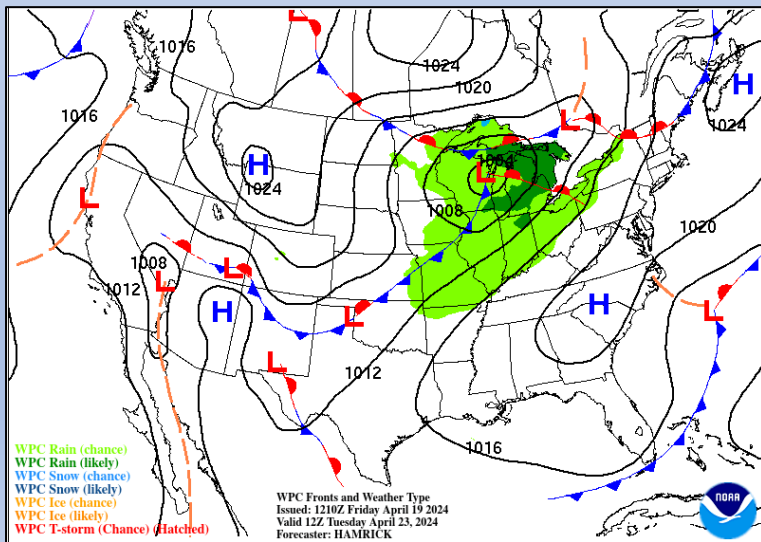
Sunday - 800 am



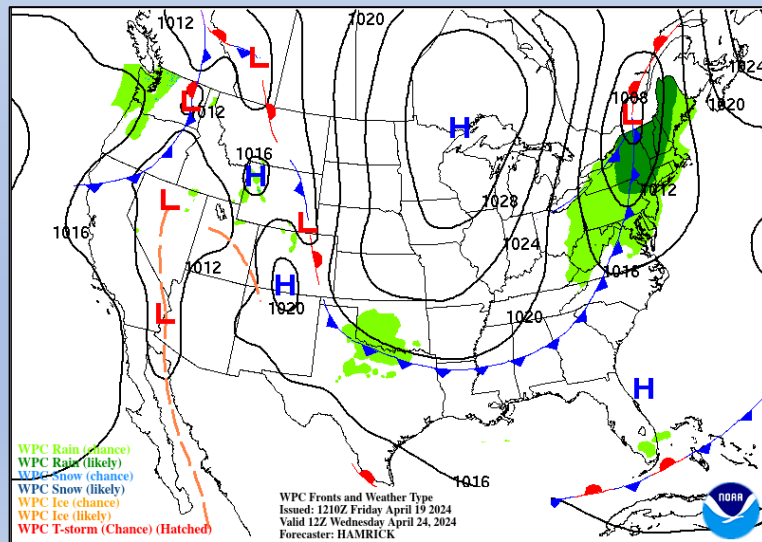
Monday - 800 am



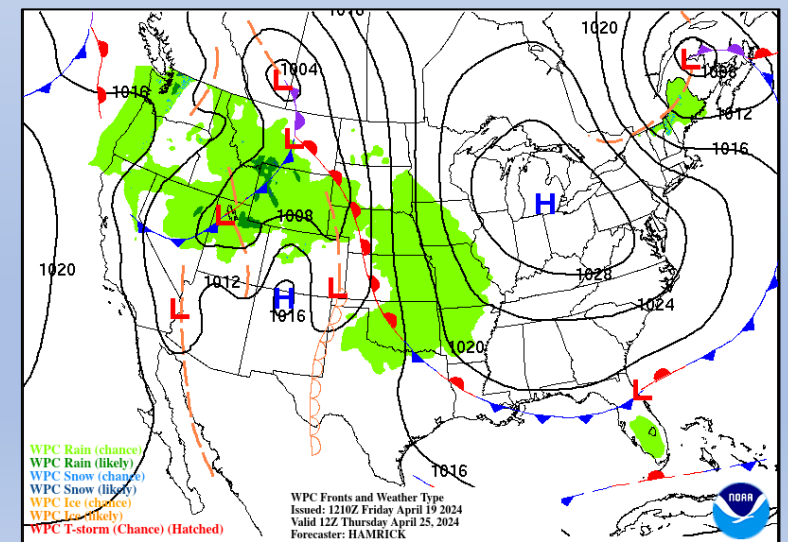
Tuesday - 800 am



Wednesday - 800 am



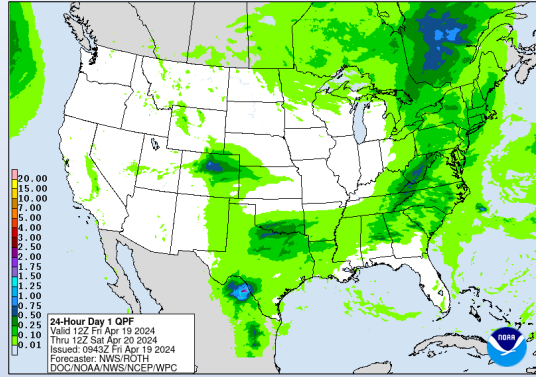
Thursday - 800 am



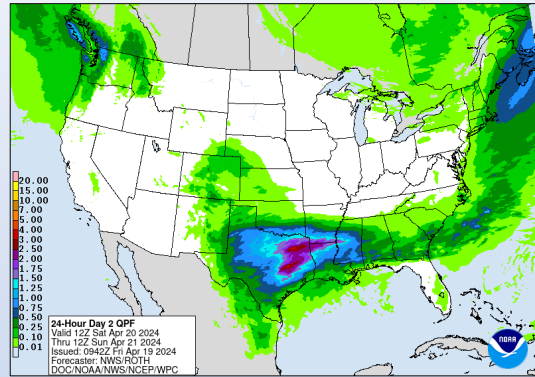
# Quantitative Precipitation Forecast, 7-Day

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

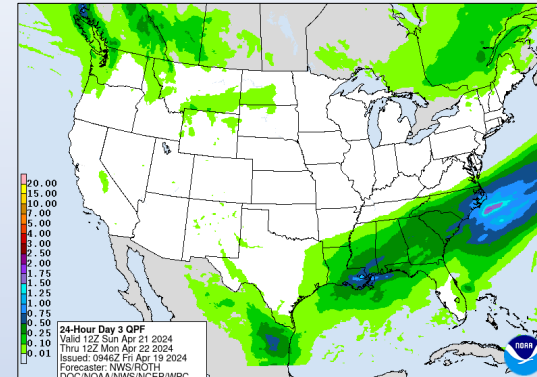
Day - 1



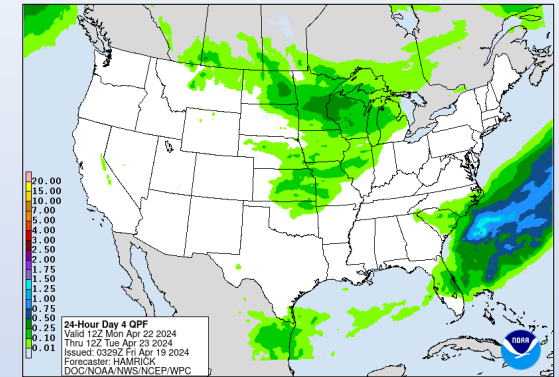
Day - 2



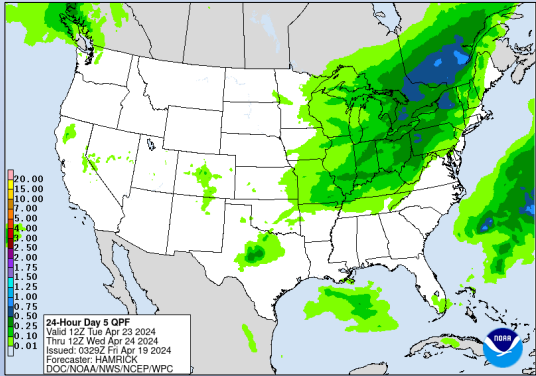
Day - 3



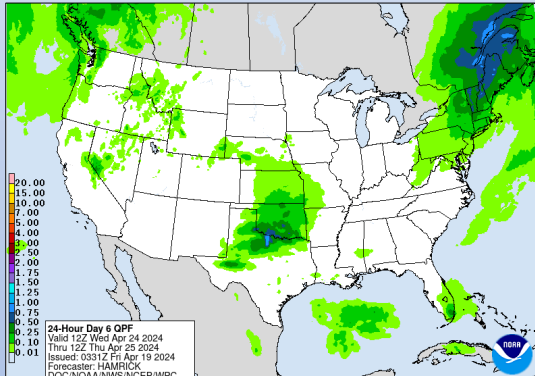
Day - 4



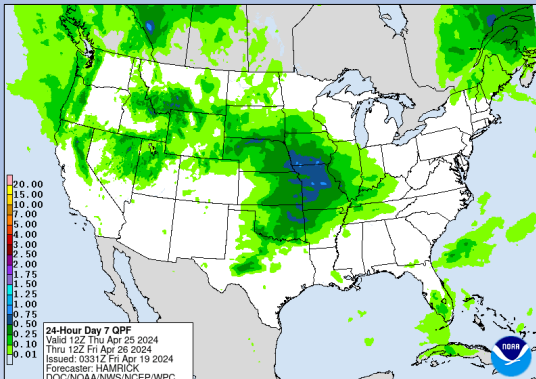
Day - 5



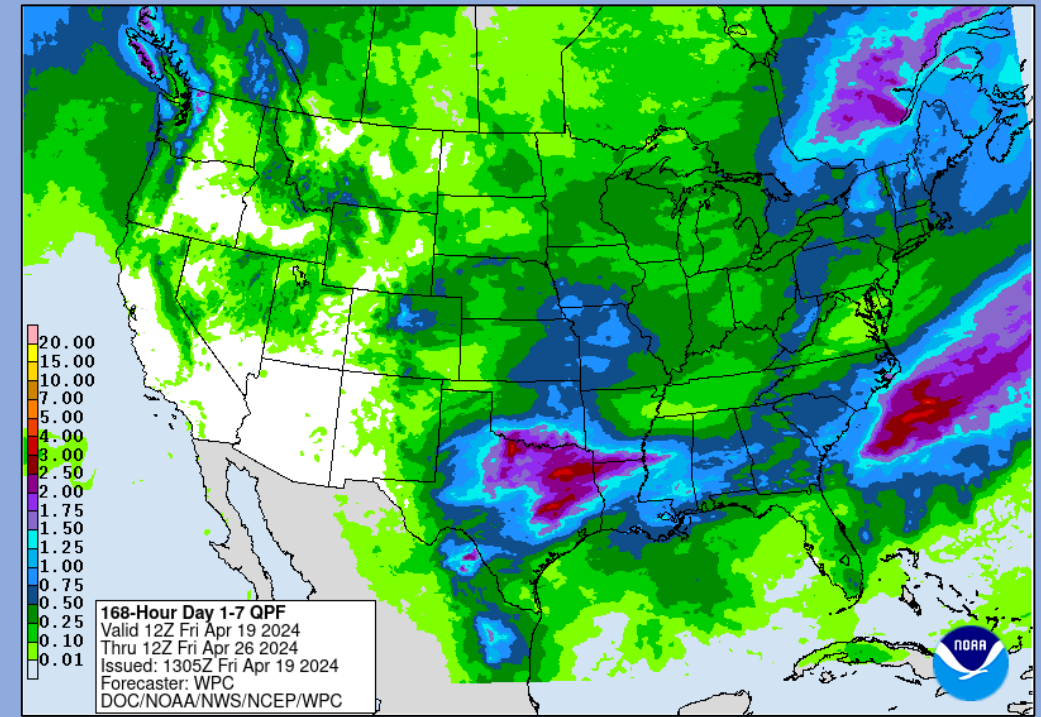
Day - 6



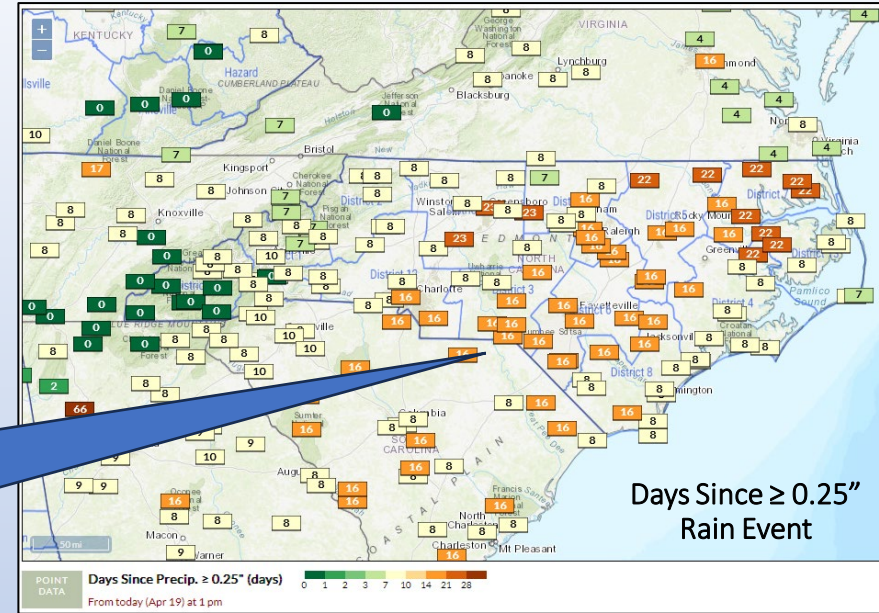
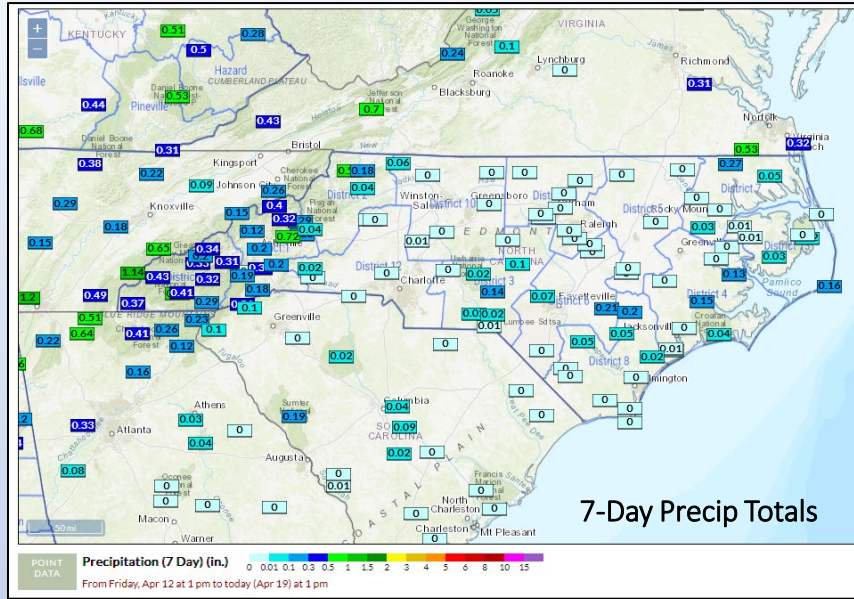
Day - 7



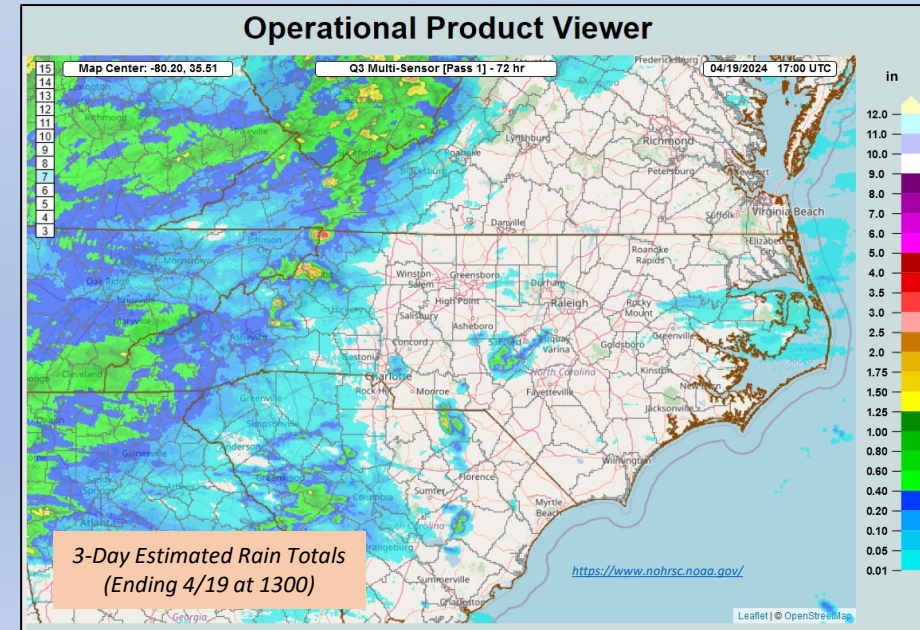
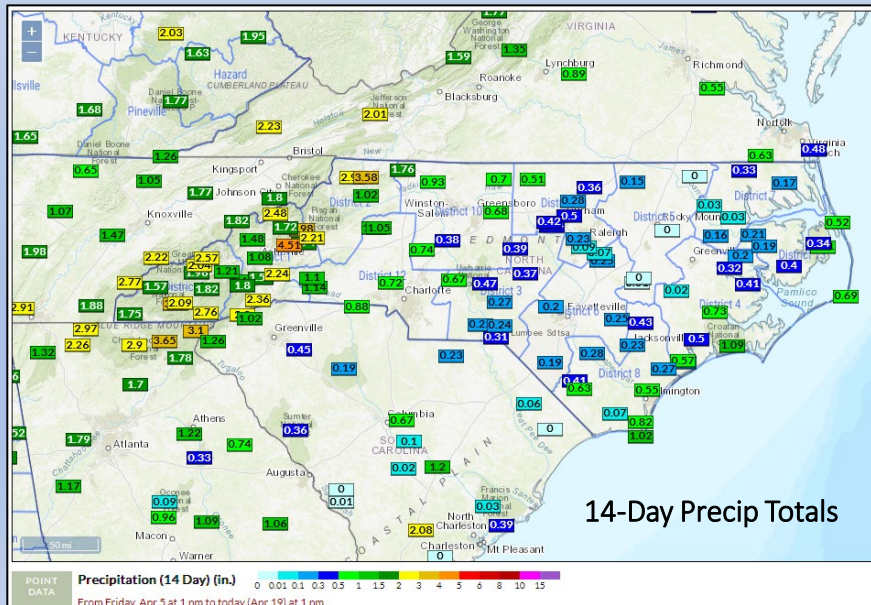
*\*Important to note these values are subject to **significant change** as weather system modeled tracks adjust farther out in time.*



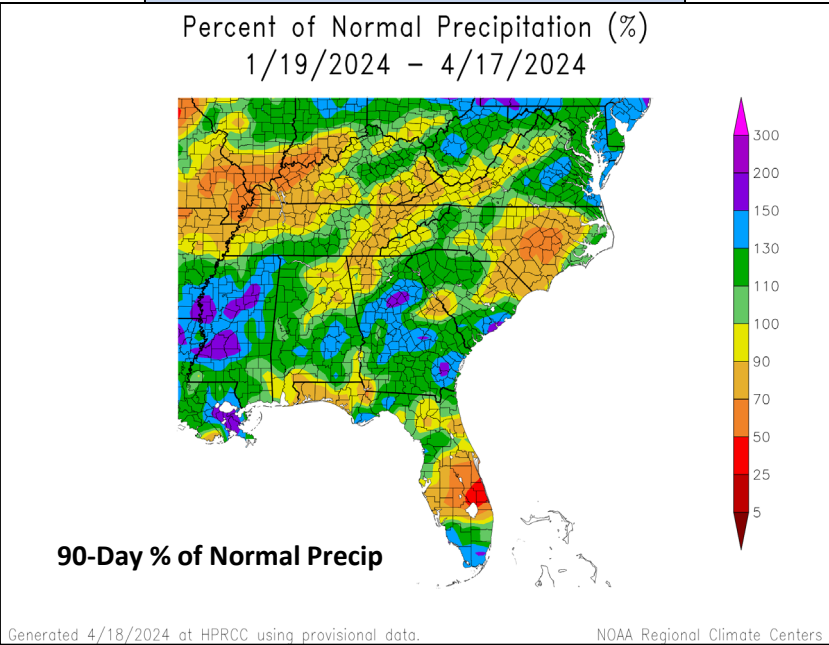
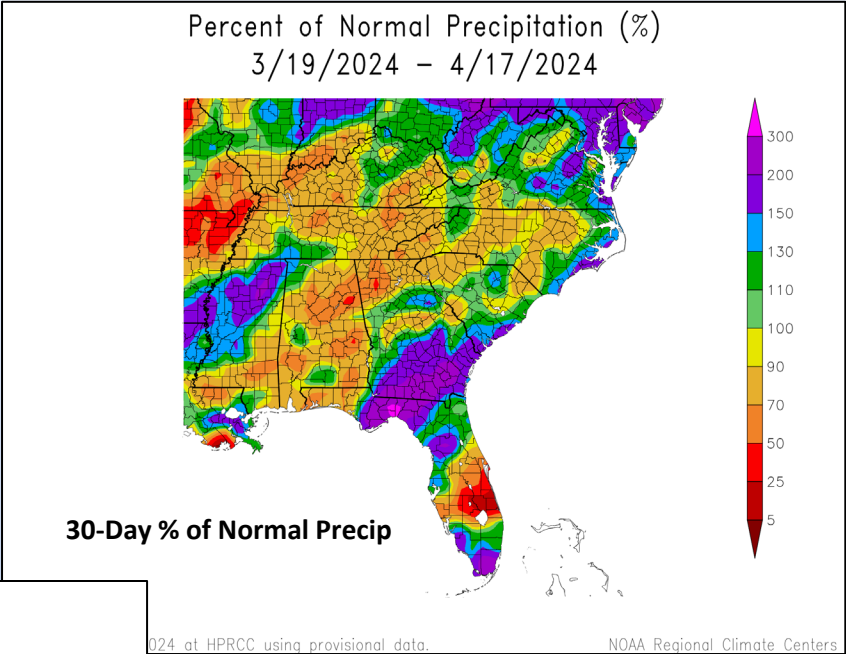
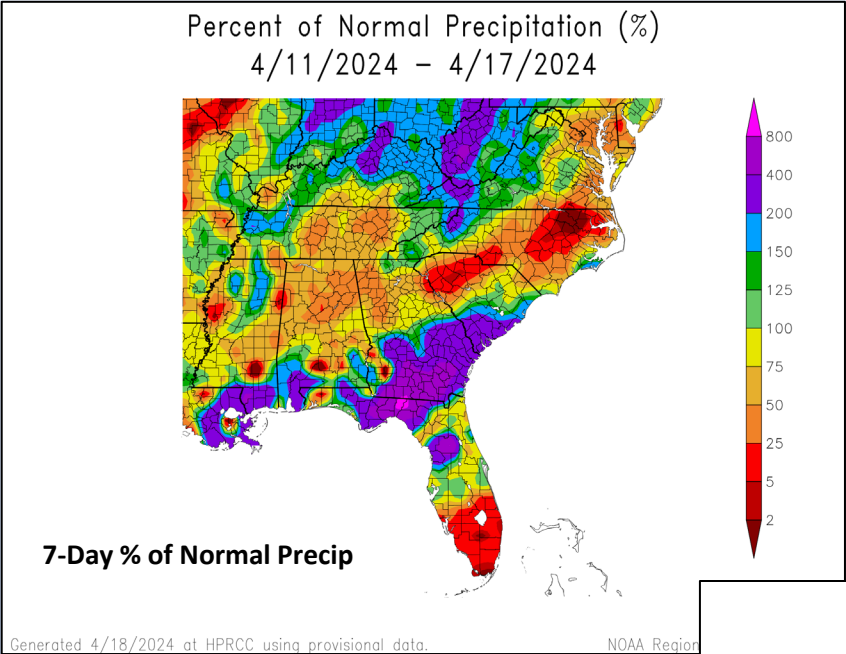
# Observed Precipitation



Note pockets of 16-22 days since an observed 0.25" rainfall event



# Percent of Normal Precip

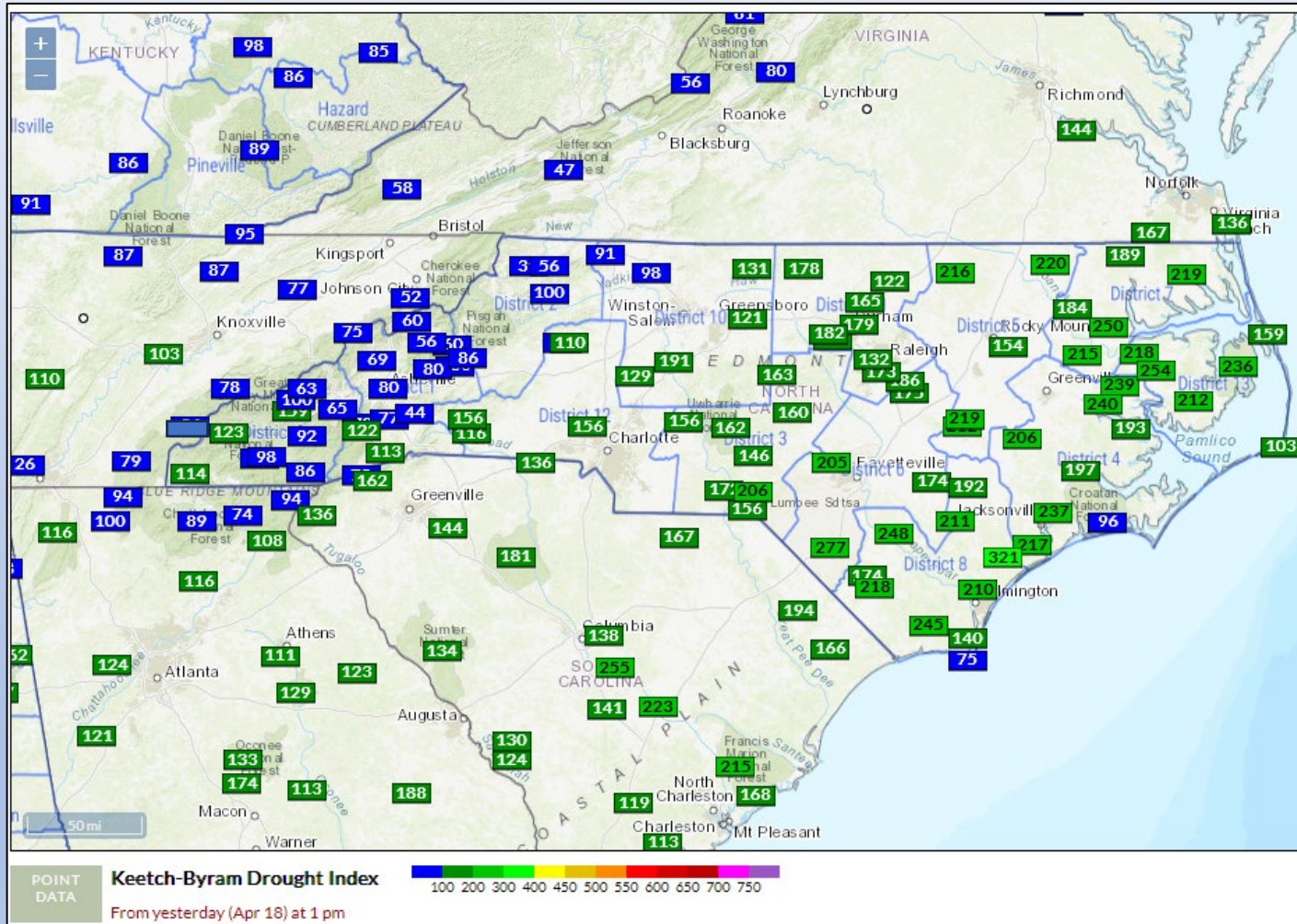


Maps from the SERCC:  
<https://sercc.com/acis-precipitation-maps>

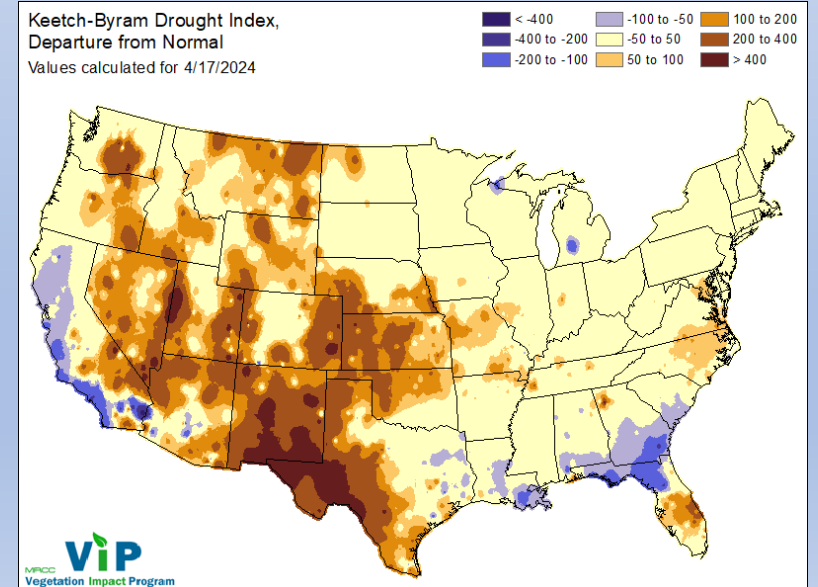
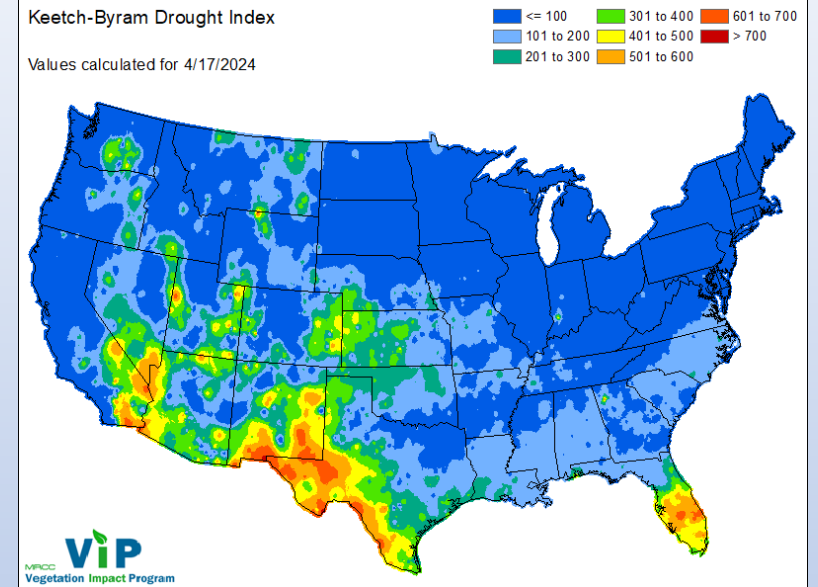
The normal slide content is not available due to an on-going data issue related to some NWS digital products.

# KBDI - Gridded & Station Points

FWIP (Point calculation from WIMS @ 1300 on 4/18/24, SCO created Grid not available)



Product below is created by the Midwestern Regional Climate Center. See [FAQ](#).





# Drought Situation

## North Carolina Drought Update

For the assessment period ending **Apr. 16, 2024**  
 From the US Drought Monitor, with input from the NC DMAC

### The Main Takeaway

A warm and windy week with limited rainfall helped Abnormally Dry (D0) conditions expand across central and eastern NC, including in the upper Tar River basin.

### This Week's Summary

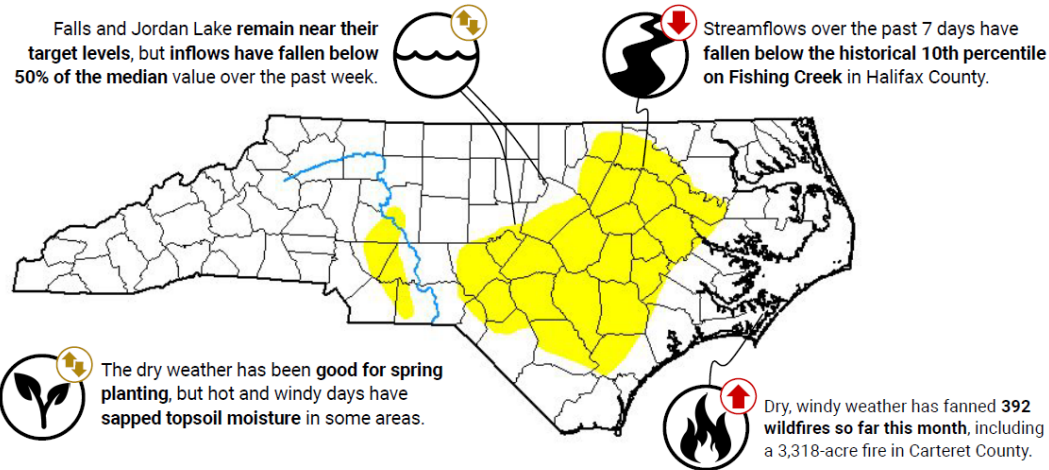
Our wet March has been followed by a dry start to April in the Piedmont and Coastal Plain. While impacts have been limited so far, some streams and soils are now drying out, accelerated by recent evaporation rates.

### Next Week's Outlook

The coverage of scattered showers will increase on Friday ahead of a cold front arriving from the west. Cooler air will move in by Sunday, dropping our highs into the 60s. A low pressure system forming offshore on Sunday will bring rain across much of the state, with totals of more than half an inch in the Coastal Plain.

For your local drought status, visit [www.ncdrought.org](http://www.ncdrought.org)

Created By: North Carolina Drought Management Advisory Council  
[www.ncdrought.org](http://www.ncdrought.org)  
 NC STATE CLIMATE OFFICE  
[climate.ncsu.edu](http://climate.ncsu.edu) @NCSCO



### Last Week's Drought Status



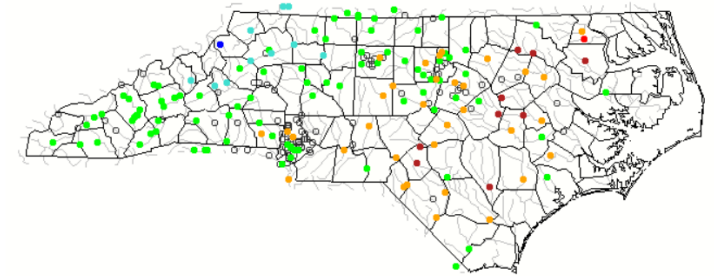
### Statewide Coverage by Category

Category	Current Coverage	Change Since Last Week
<b>D0: Abnormally Dry</b>	27.84%	+16.36%
<b>D1: Moderate Drought</b>	0.00%	0.00%
<b>D2: Severe Drought</b>	0.00%	0.00%
<b>D3: Extreme Drought</b>	0.00%	0.00%
<b>D4: Exceptional Drought</b>	0.00%	0.00%

## Map of 7-day average streamflow compared to historical streamflow for the day of the year (North Carolina)

North Carolina or Water-Resources Regions All Days

Thursday, April 18, 2024



USGS

Search USGS streamgage

Choose a data retrieval option and select a location on the map  
 List of all stations  Single station  Nearest stations

Explanation - Percentile classes							
Low	<10	10-24	25-75	76-90	>90	High	Not-ranked
	Much below normal	Below normal	Normal	Above normal	Much above normal		

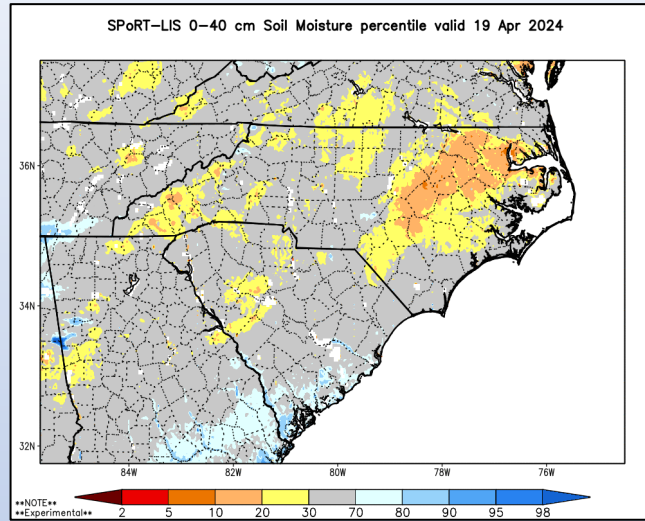
Source: <https://waterwatch.usgs.gov/index.php?m=pa07d&r=nc&w=map>

Note decline in streamflow values to the east (see above).

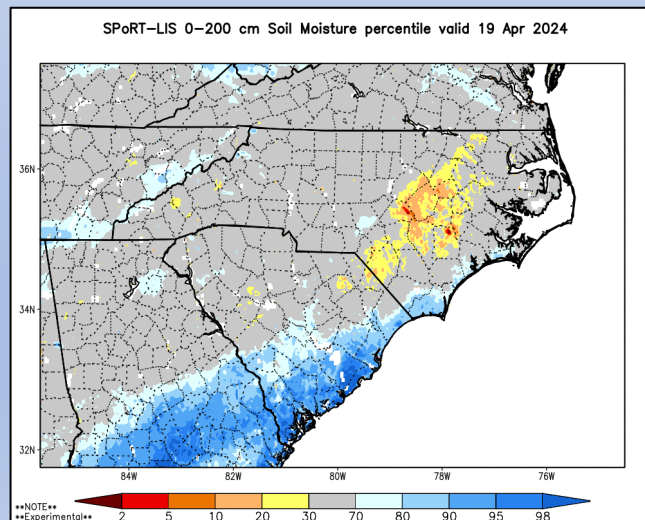
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 16% area increase in D0 Abnormally Dry conditions (see left).

# SPoRT Modeled Relative Soil Dryness

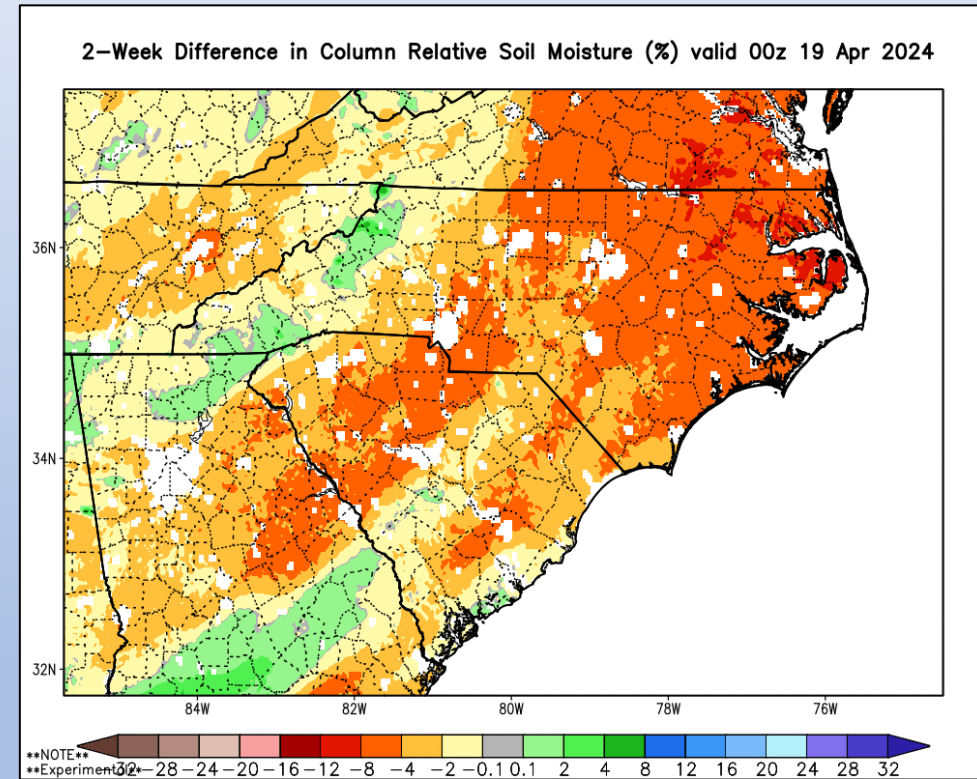
## 0-40 cm Depth



## 0-200 cm Depth

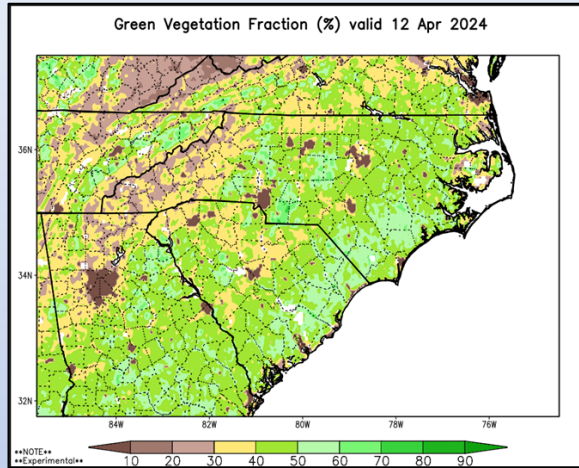


- See areas of modeled improvement/degradation over the past couple of weeks. As green-up and evaporative demand increases, expect more rapid changes if rainfall continues to be scattered in nature.

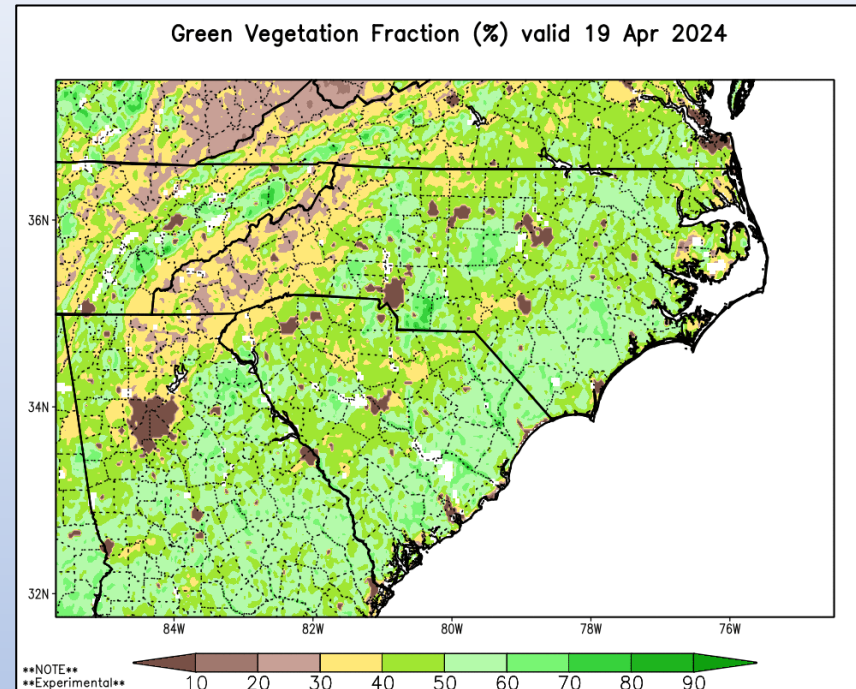


# Green Fraction & Green-Up Anomaly

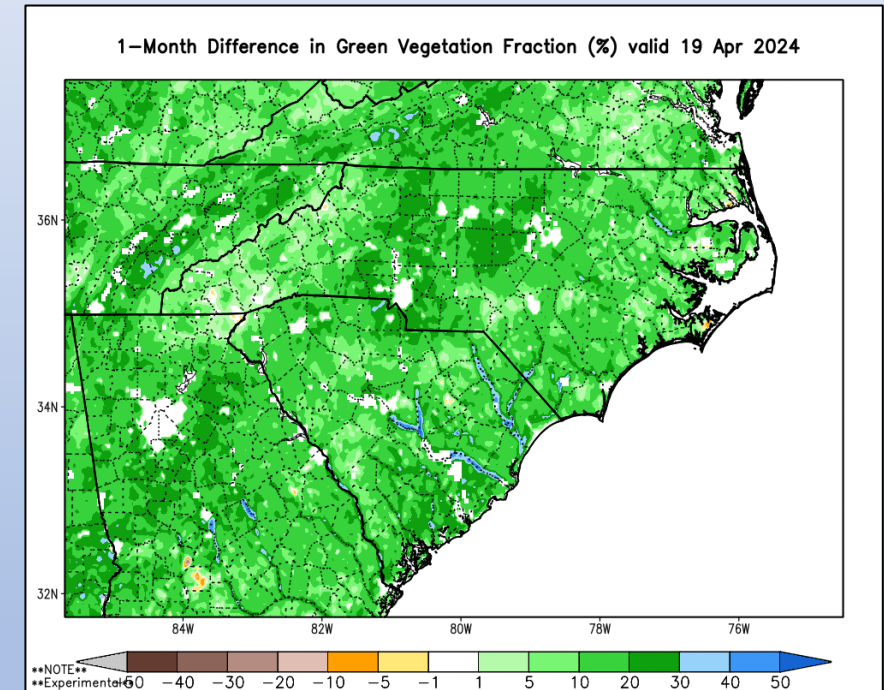
Last Week



Current

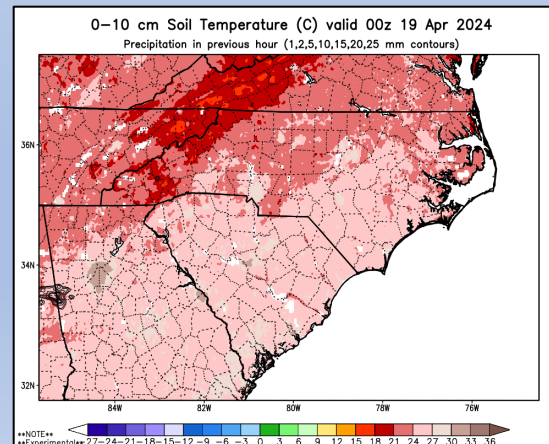


1-Month Change



Lower elevation sites remain about 6-12 days ahead of "normal" related to green-up processes, due to generally abnormally warm conditions. \*Not Pocosin or Bay Environments\*

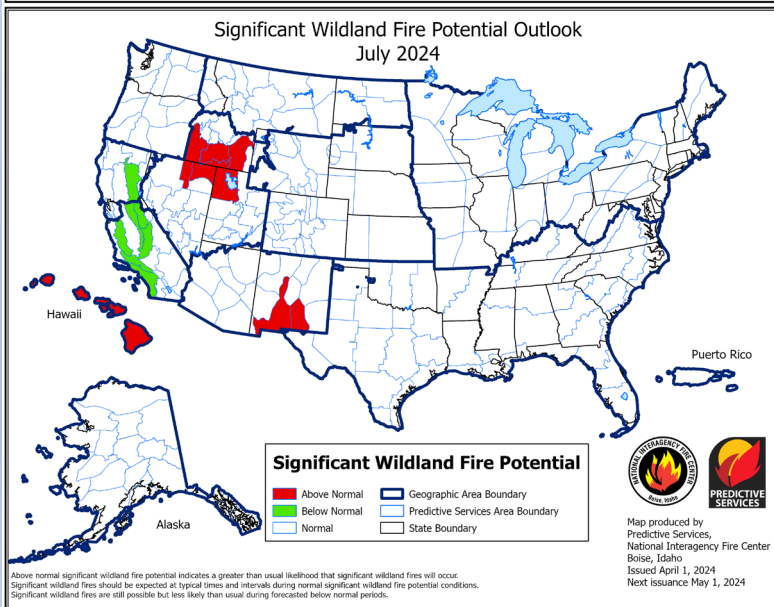
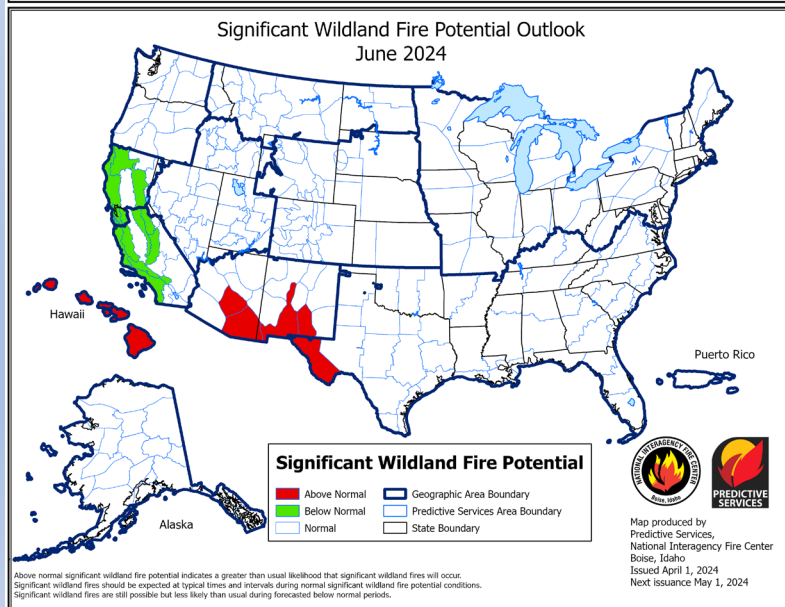
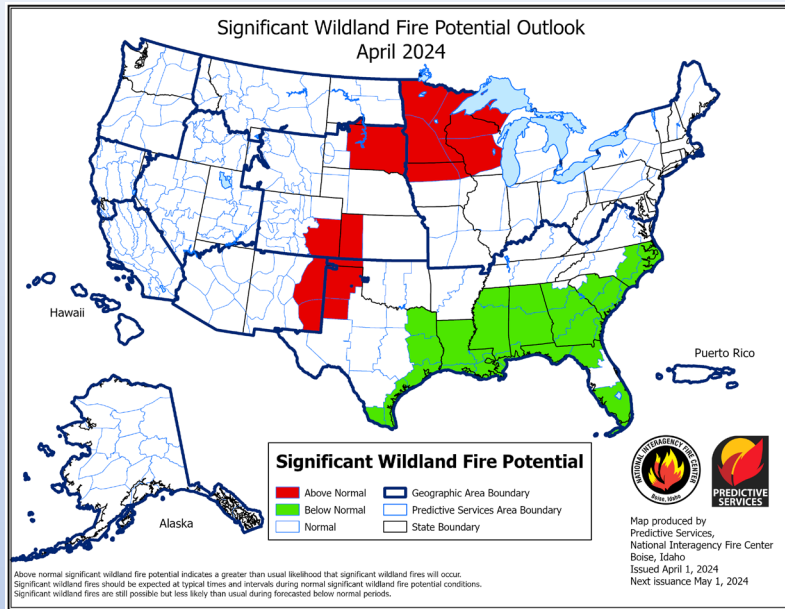
Higher elevation areas were slowed due to repeated colder conditions. However, soils are now warming in those areas (see right).



Some eastern areas that had earlier seasonal flushes of growth are showing less pronounced month-to-month change now, hence slight decrease.

# Significant Wildland Fire Potential Outlook:

Updated 4/1/24 – Next Update on 5/1/24



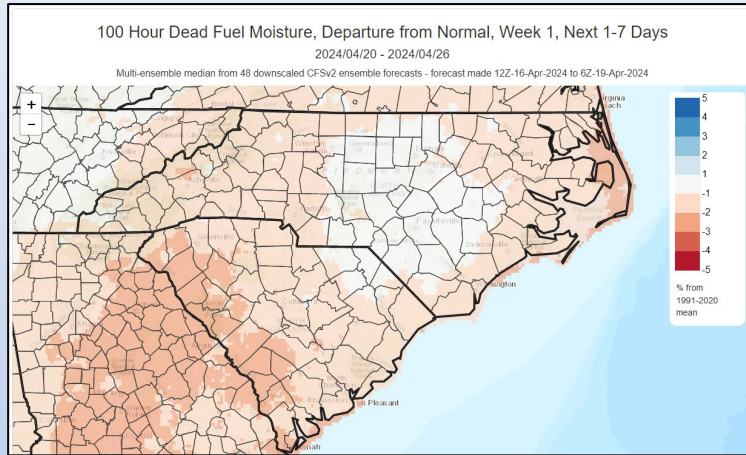
*A significant fire is one that requires resources from outside the district (other than aviation). IA potential is based more on shorter term weather factors. Just a few days of dry weather can increase IA activity considerably as we have seen this year.*

**\*Forecast uncertainty could easily lead to an expansion of "Normal" or "Above Normal" Fire Potential if abnormally dry conditions expand/worsen going through April.**

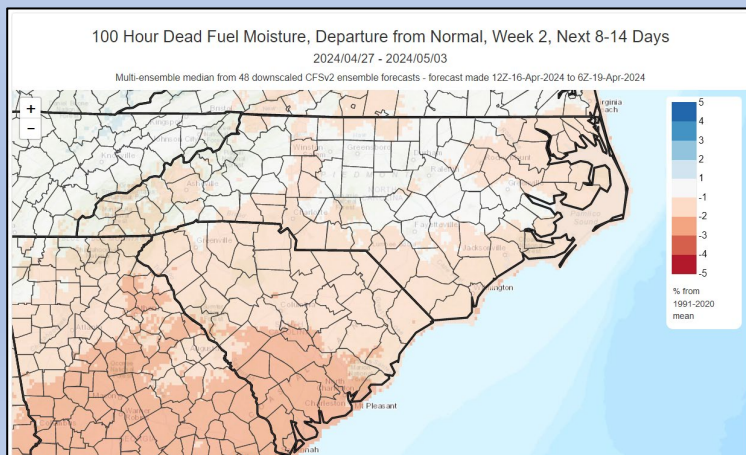
# Modeled Departure from Normal by Week: 100-hr Fuels

*Output relies on experimental forecast outputs and is subject to change*

## Week-1



## Week-2



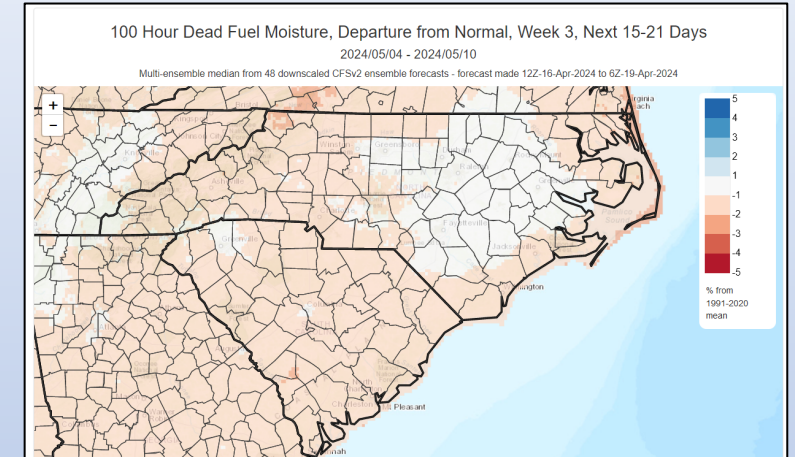
This output can provide insight into general drying trends and potential impacts to overall fire danger, especially prior to full green-up.

Note near normal to slightly drier than normal conditions for Weeks 1-3. Week-4 show potential for fuel moistures to be near normal.

Relates to interactions of warmer/colder temps, moist/dry air masses, precip amt/duration and overnight RH recovery trends.

*Important to note that there is significant forecast uncertainty as you go further out in time.*

## Week-3



## Week-4

