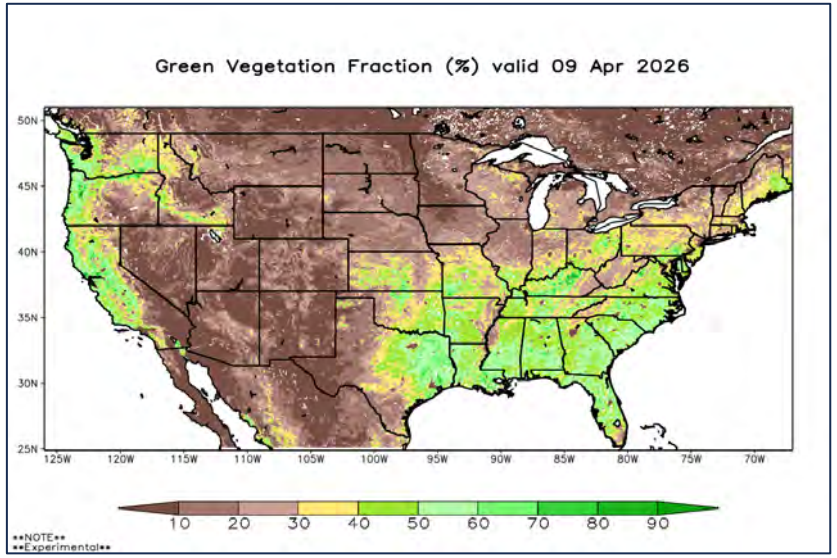
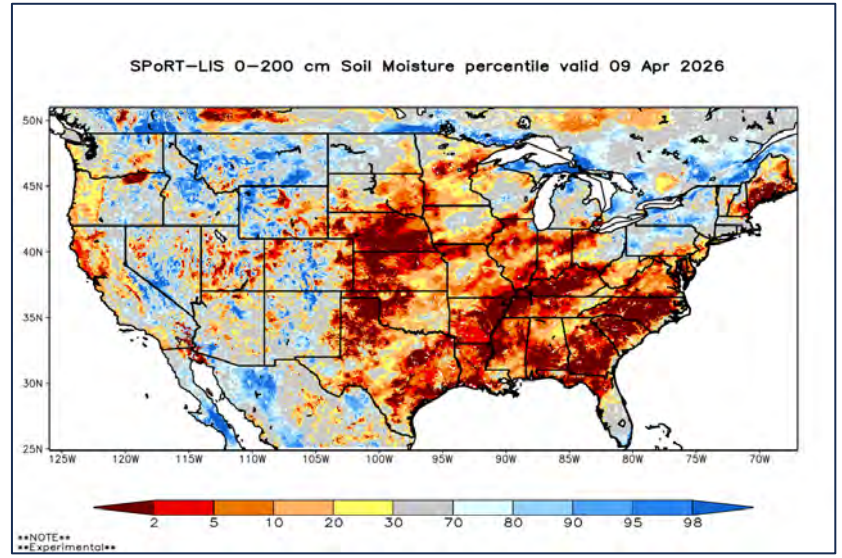
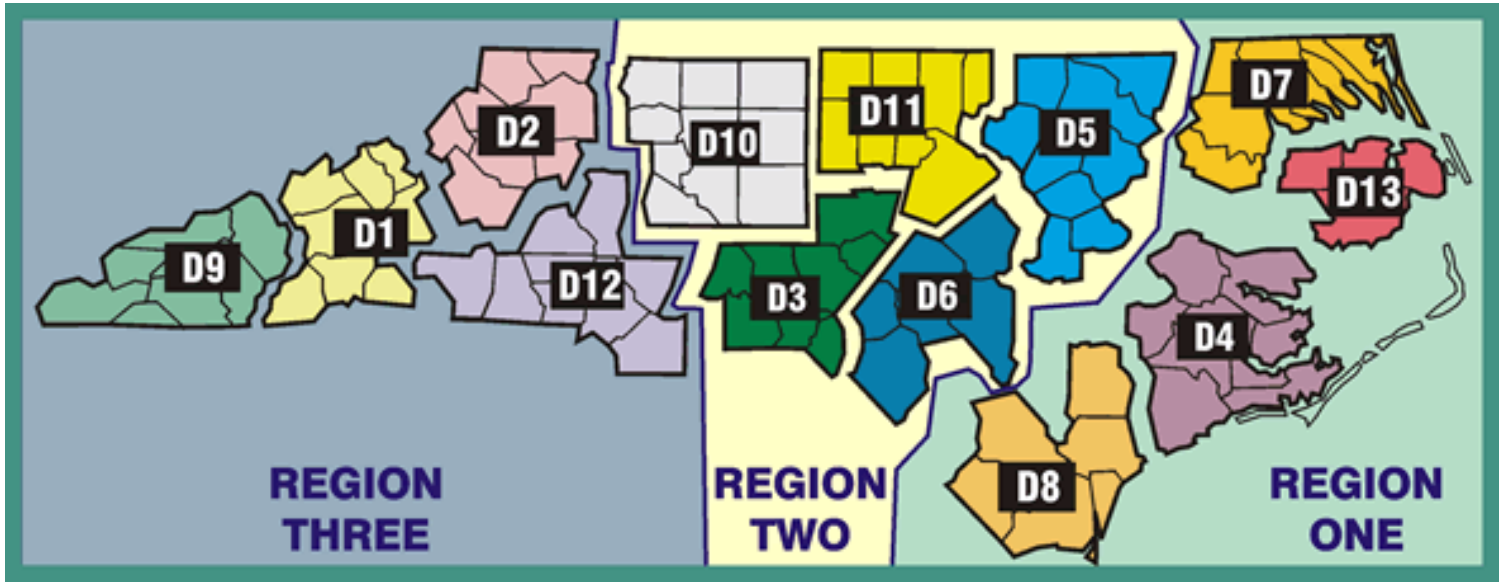
Weekly Fire Danger Assessment
NCFS – All Regions







For Time Period:

Friday (4/10/26) to Thursday (4/16/26)

Created by: Jamie Dunbar
Fire Environment Staff Forester
NC Forest Service
Created: 4/10/26

Statewide Wildfire Context

January: 10-yr avg is 339 fires for 702 acres
February: 10-yr avg is 639 fires for 1,683 acres
March: 10-yr avg is 1,009 fires for 6,401 acres
***April: 10-yr avg is 627 fires for 6,803 acres**
May: 10-yr avg is 283 fires for 1,298 acres
June: 10-yr avg is 231 fires for 2,383 acres
July: 10-yr avg is 182 fires for 551 acres
August: 10-yr avg is 126 fires for 420 acres
September: 10-yr avg is 194 fires for 422 acres
October: 10-yr avg is 265 fires for 1,996 acres
November: 10-yr avg is 534 fires for 6,173 acres
December: 10-yr avg is 372 fires for 733 acres

January: 1,083 incidents for 1,964 acres
February: 829 incidents for 1,136 acres
March: 1,418 incidents for 6,289 acres

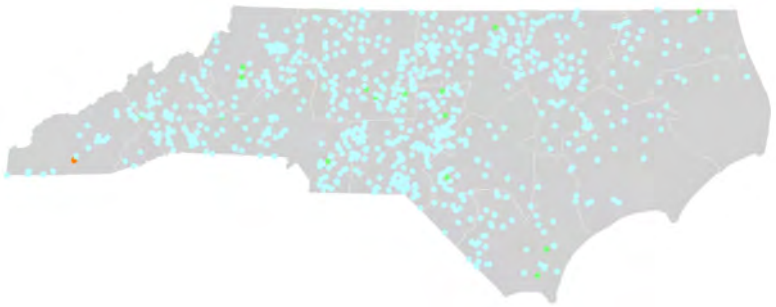
MTD Activity (ending 4/9): 264 incidents for 1,369 acres

All wildfire activity data is preliminary
Does not include additional federal wildfires/acres
2016-2025 CY Average

**Largest incidents by discovery date, MTD:
from fiResponse & preliminary reporting only

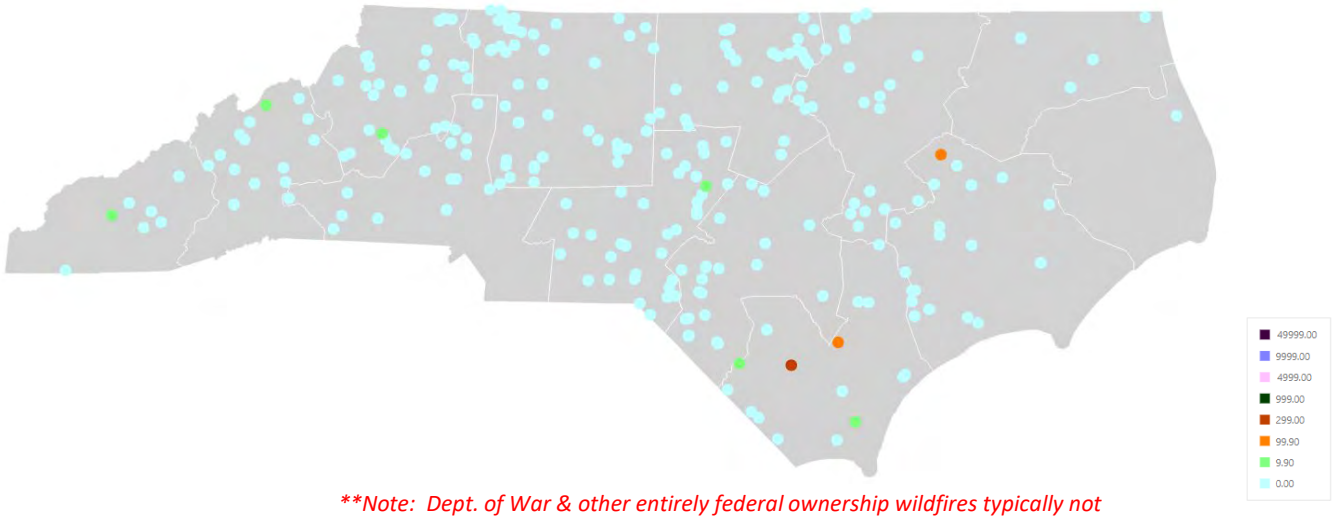
Incident Name	Discovery Date	Region	District	County	Acres
Rosindale Rd	4/8/2026	Region 1	District 8	Bladen County	762.00
Roosevelt Spain Road	4/4/2026	Region 1	District 4	Pitt County	158.00
Whitehall Plantation	4/3/2026	Region 1	District 8	Pender County	147.00
Wiggins Creek	4/2/2026	Region 3	District 9	Swain County	58.00
Midas Bolick	4/4/2026	Region 3	District 2	Caldwell County	30.00
Bald Mountain	4/2/2026	Region 3	District 1	Yancey County	25.00
Swain Rd Fire	4/9/2026	Region 1	District 8	Brunswick County	20.00
Rough Horn Road	4/4/2026	Region 1	District 8	Columbus County	15.00
Riddle Rd	4/1/2026	Region 2	District 3	Lee County	12.00
Karlee Dr	4/2/2026	Region 2	District 6	Cumberland County	8.00
Paynes Tavern	4/8/2026	Region 2	District 11	Person County	8.00

February 2026



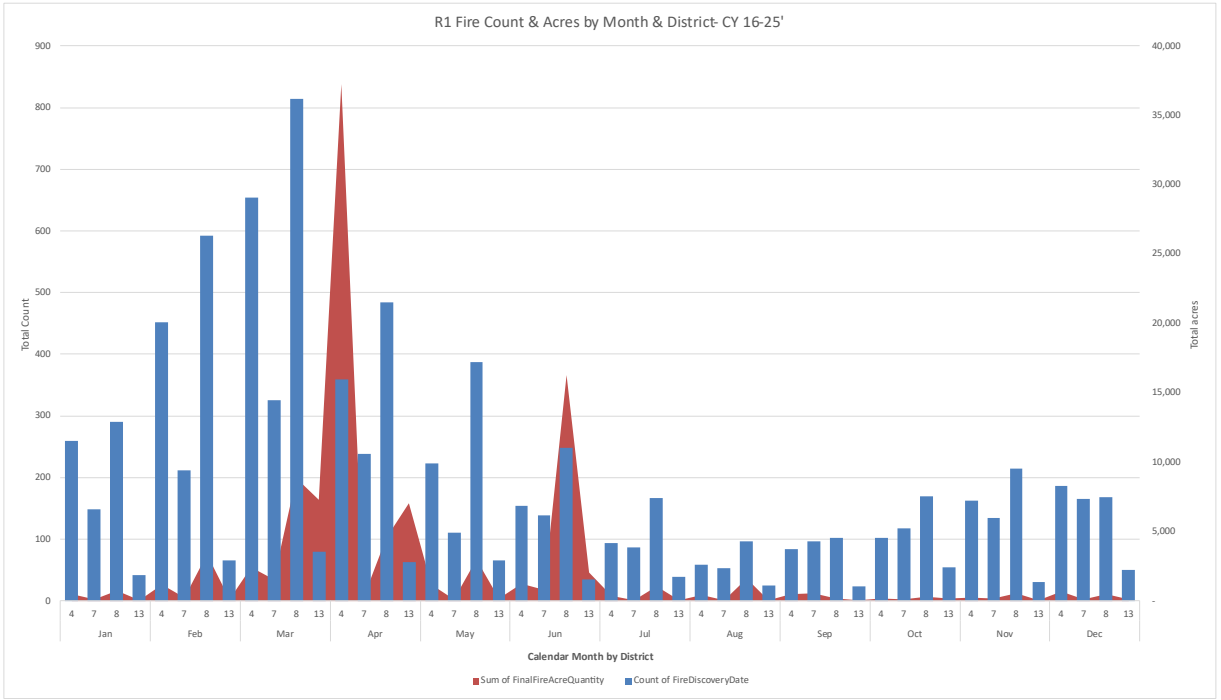
March 2026

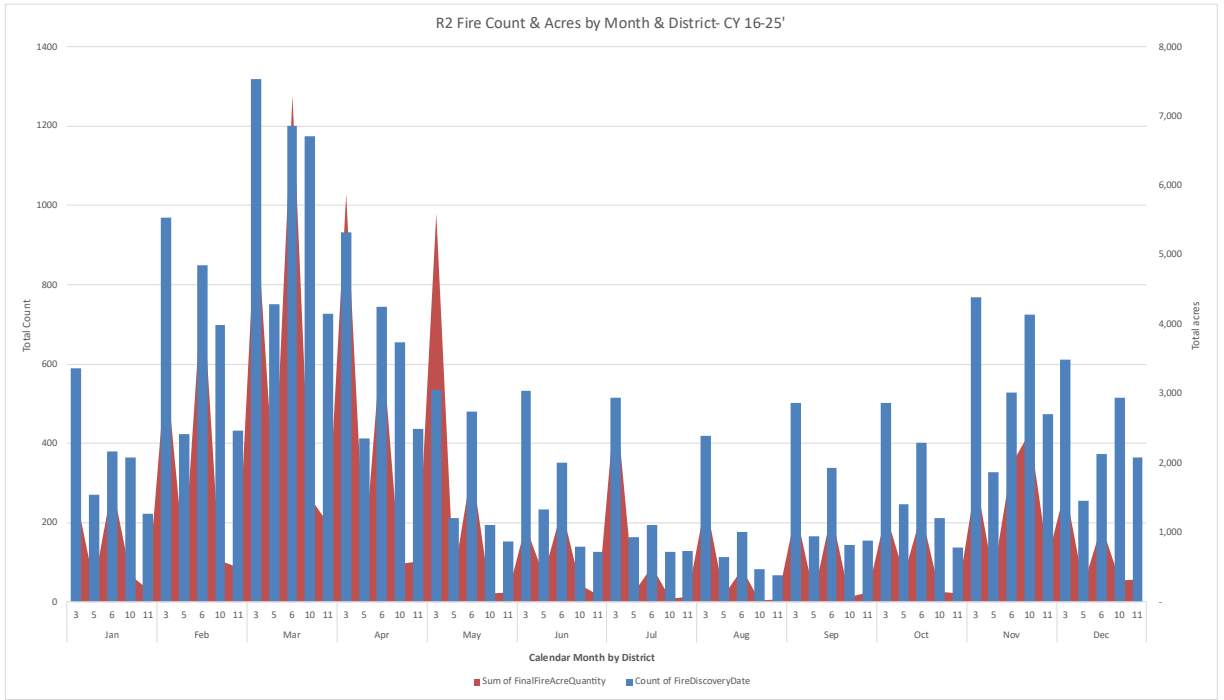
MTD Activity (ending 4/9)

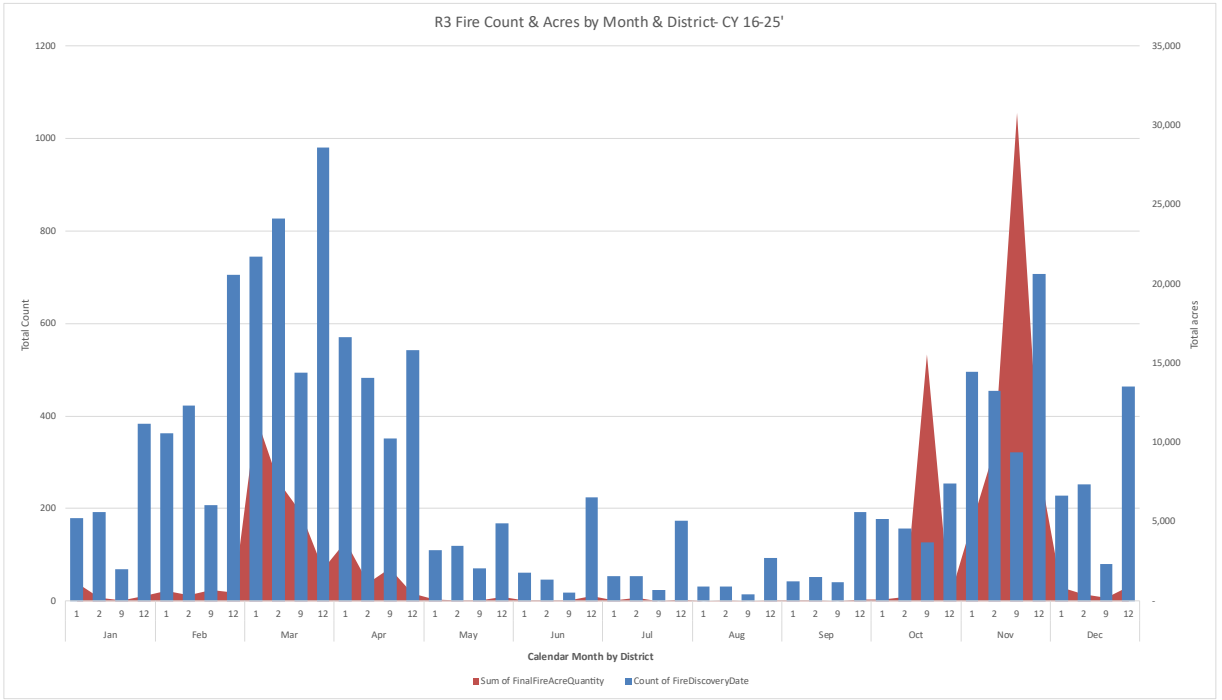


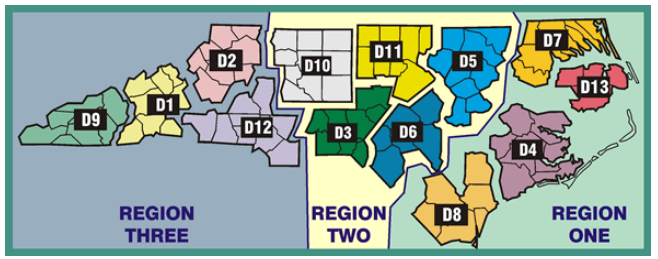
***Note: Dept. of War & other entirely federal ownership wildfires typically not shown on fiResponse, unless NCFS integrated into response.*

Seasonal Distribution of Regional Fires & Acres by Month from 2016-2025





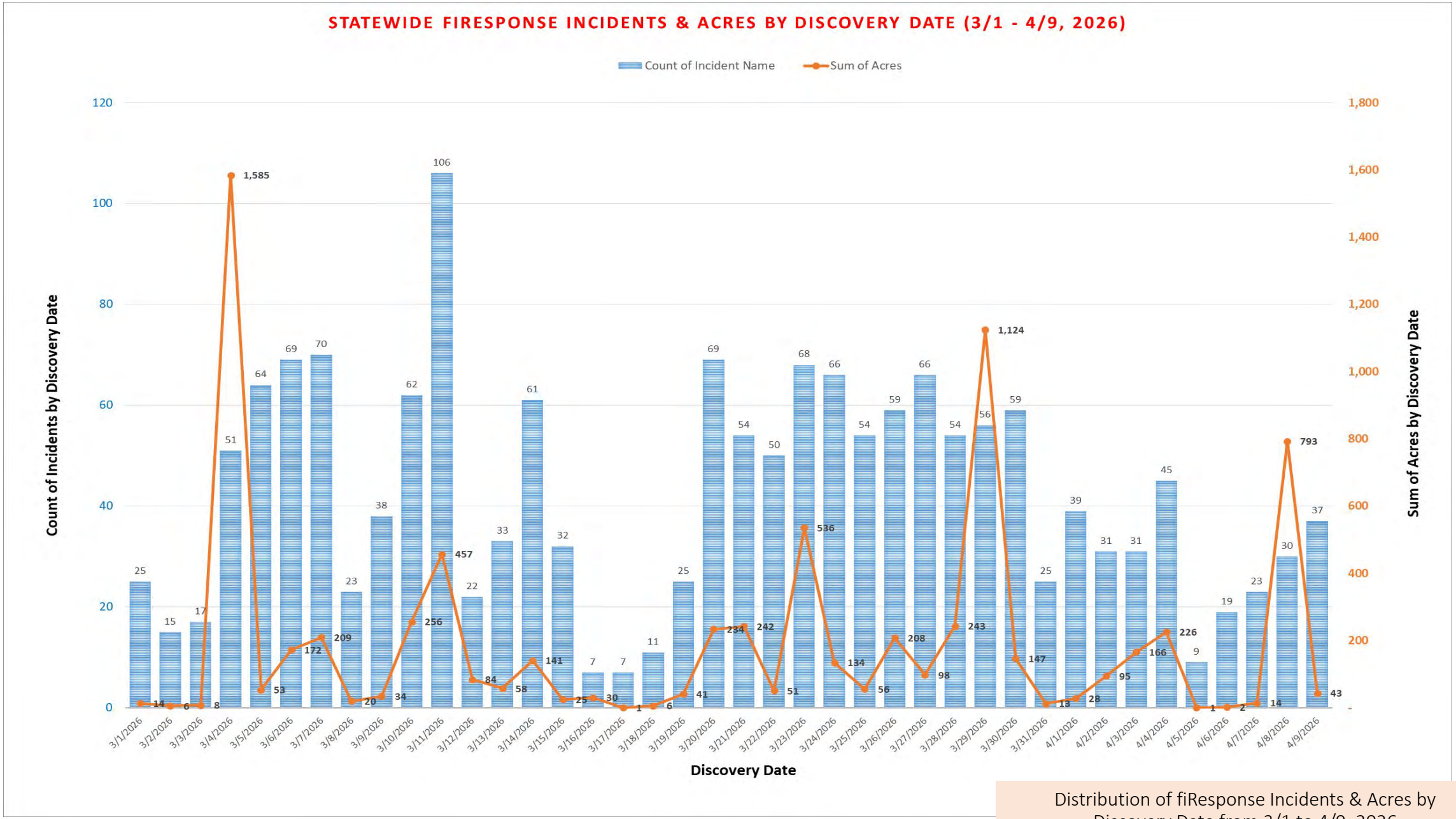




Cause: All Cause Codes, Statewide, NCFS Reported Fires Only.
Preliminary Data from NASF Report Extract

Peak Fire Count vs. Peak Acres (by Discovery Date)

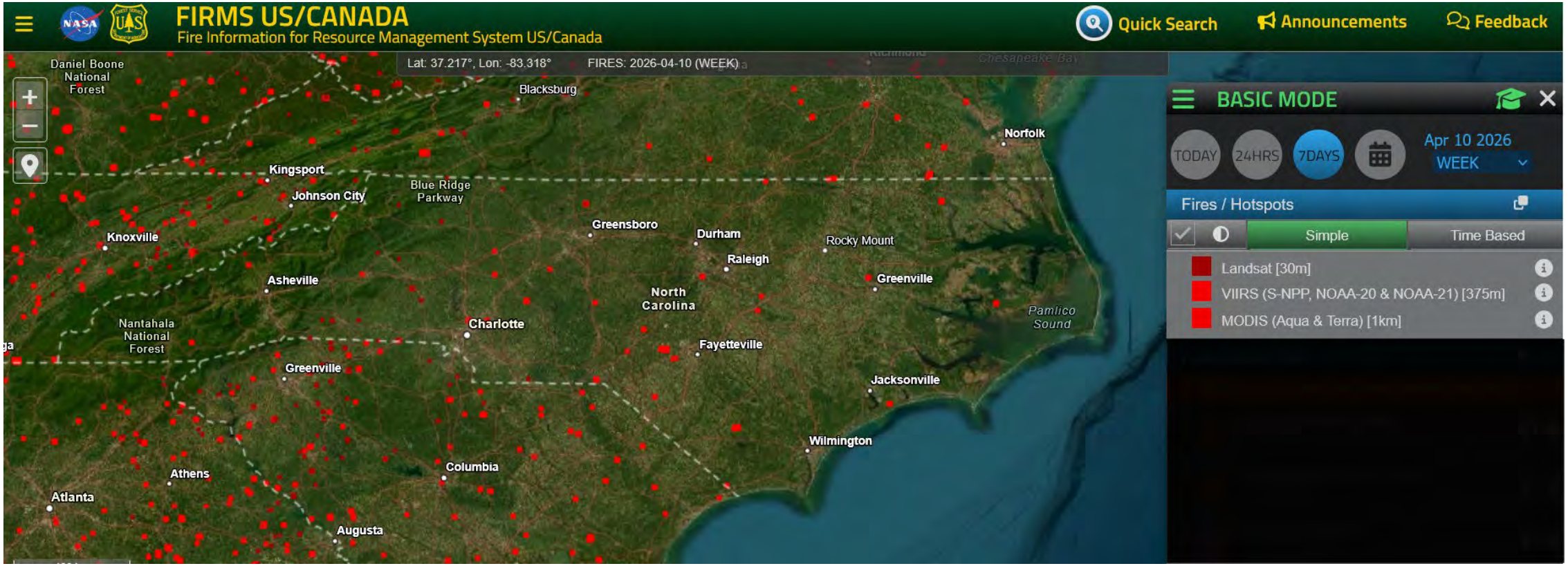
- Fuel Dormancy?
- Live Fuel Volatility?
- Human Factor?
- Drought Influences?



Distribution of fiResponse Incidents & Acres by Discovery Date from 3/1 to 4/9, 2026

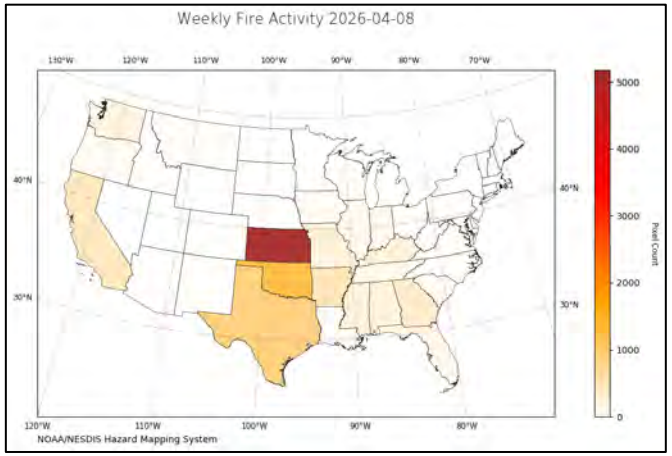
Data is preliminary and subject to change

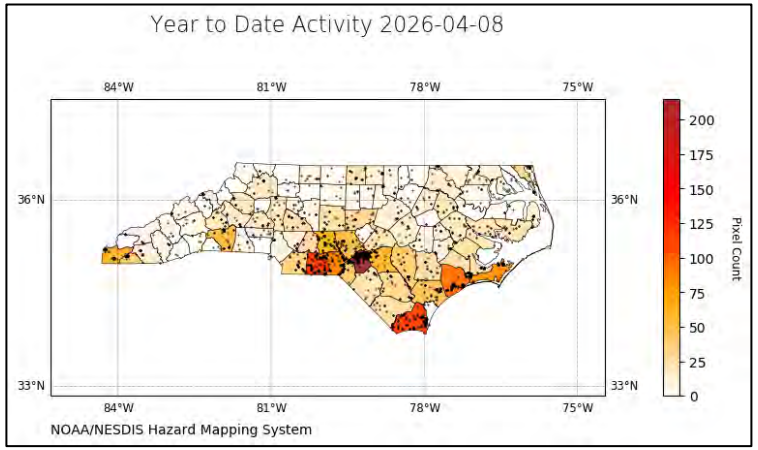
Weekly Heat Detects



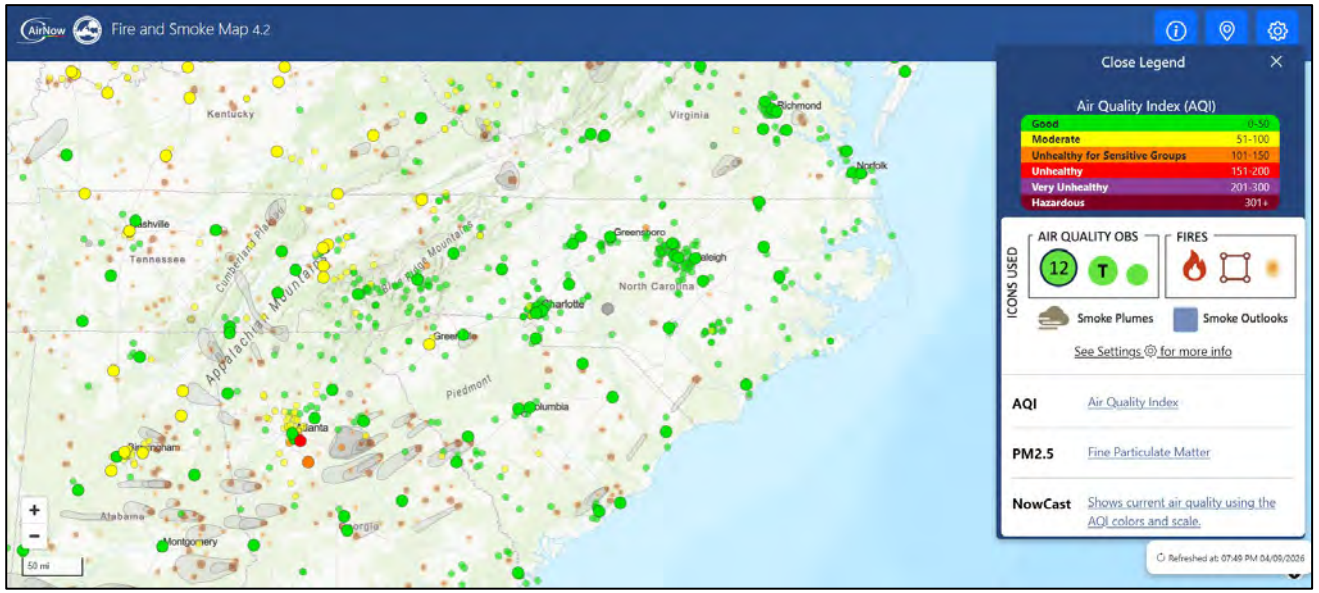
NC Map showing past week satellite detects from same source & bottom right maps display fire pixel counts. Note NC map below is by CY-Year (YTD context ending on 4/8/26) . Note that cloud cover and other factors can limit detections, not all detects may be “forestry related”. Hazard Mapping System link:

https://www.ospo.noaa.gov/products/land/hms.html#maps

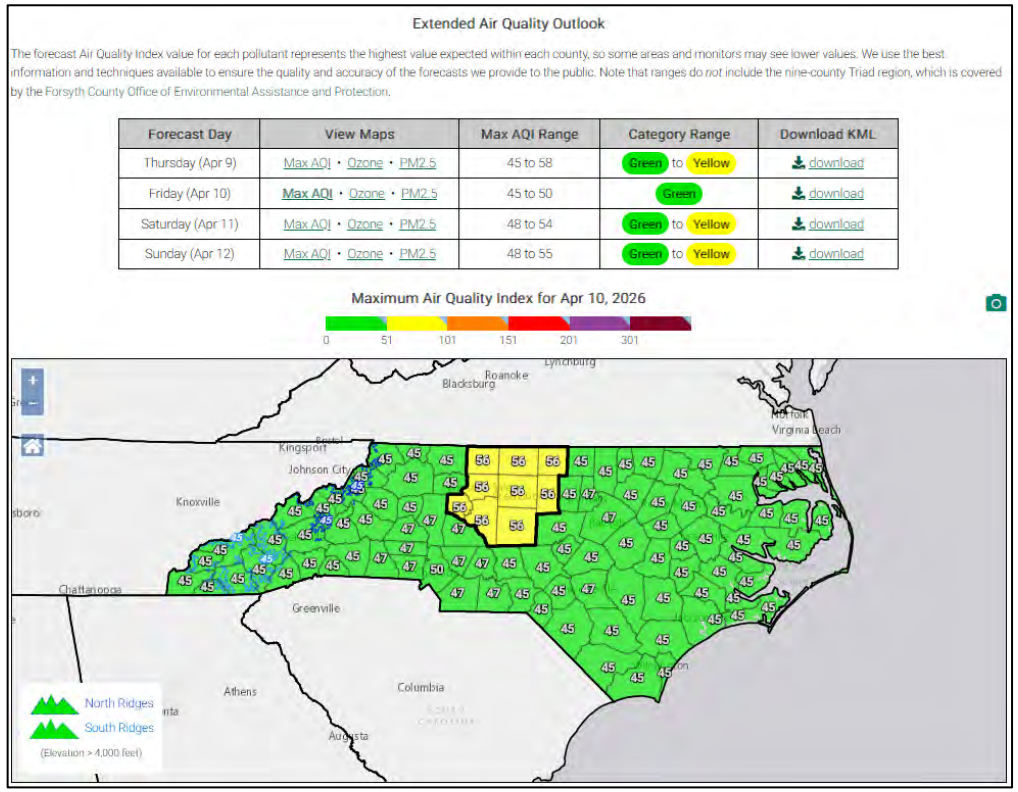




Air Quality Notes



Fire & Smoke Map heat detects from VIIRS (above). https://fire.airnow.gov/#



This forecast was issued on **Thursday, April 9, 2026** at **3:30 pm**. This forecast is currently valid.

Today's Air Quality Conditions

Air quality levels are predominantly in the Code Green range statewide this afternoon.

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

General Forecast Discussion

Through Friday, a back door cold front will usher in another shot of cool and clean air that should continue to hold air quality levels in the Code Green range across the state.

Outlook

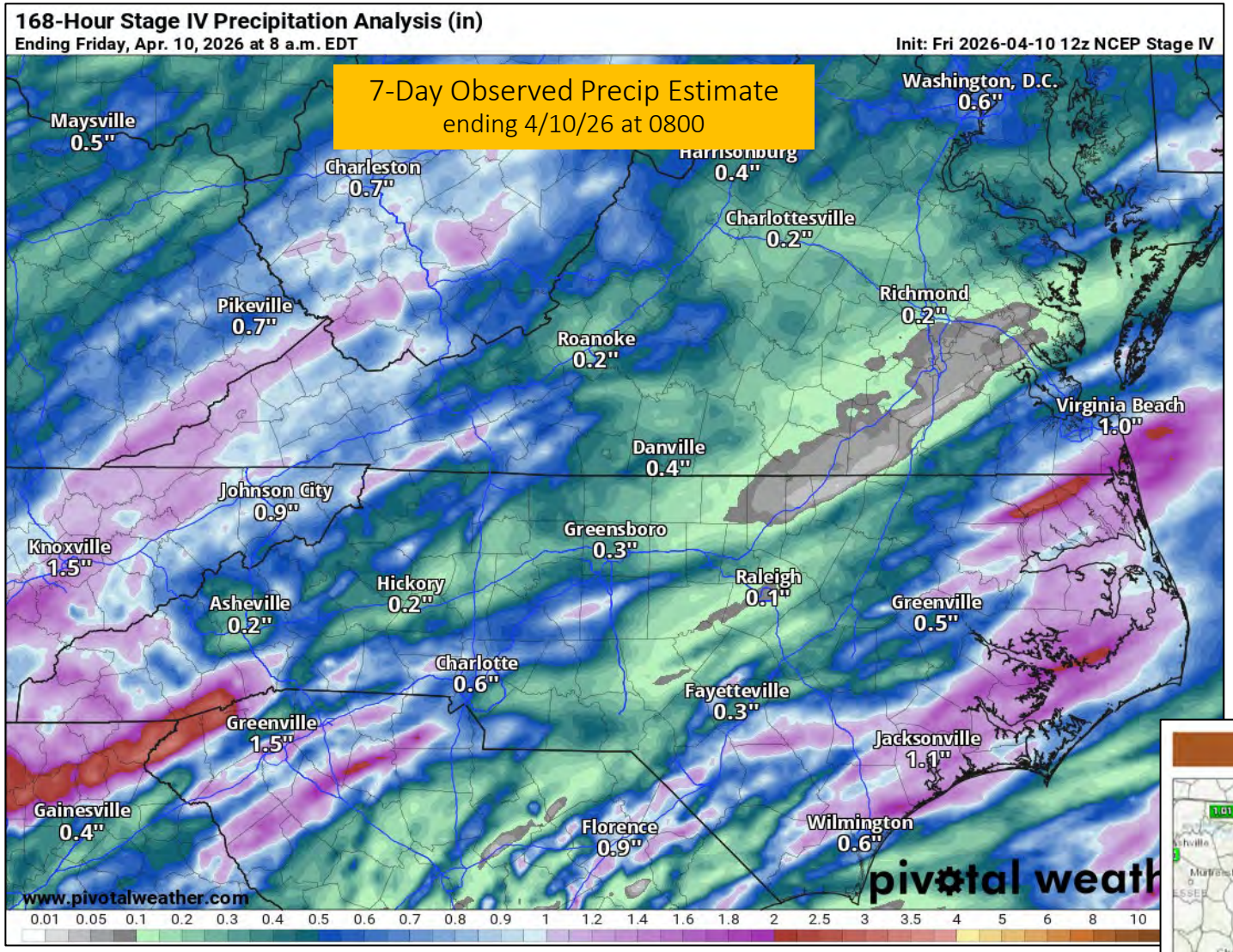
By Saturday on into Sunday, high pressure will continue to remain overhead resulting in continued dry and stagnating conditions. Both fine particulate and ozone levels will likely slowly elevated, especially across the major metros, with levels of both pollutants possibly rising into the lower Code Yellow range in the greater Charlotte region.

With the persistent, worsening drought conditions the threat of wildfire(s) continues to increase. The air quality in a given location could dramatically worsen due to wildfire smoke so please stay tuned to the forecast and report any smoke to: AQ_Forecast@deq.nc.gov

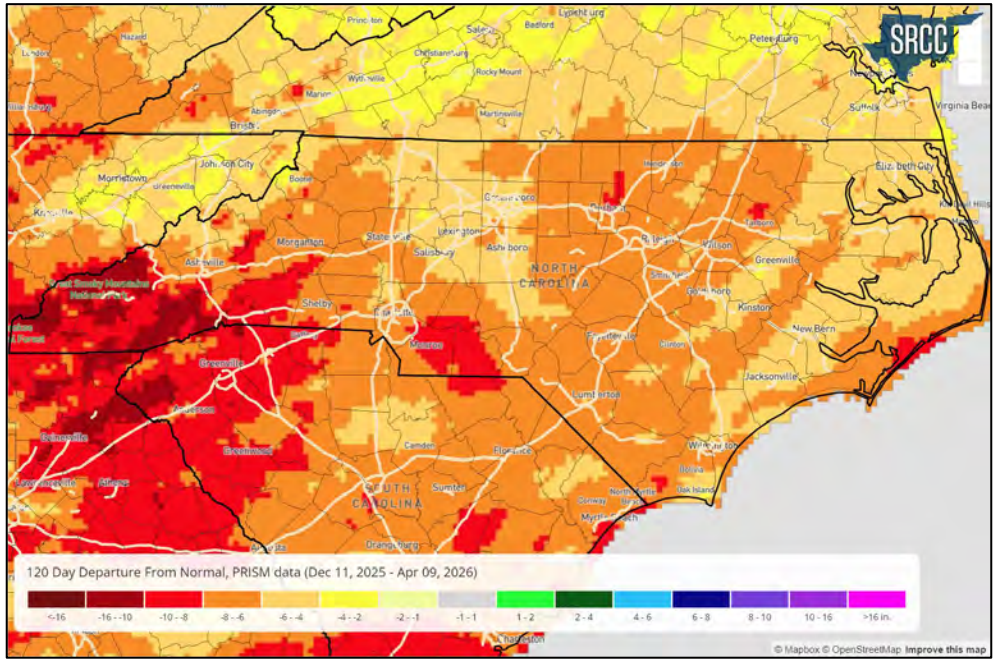
Author: *Bradley McLamb (bradley.mclamb@deq.nc.gov) - NC Division of Air Quality*

Daily PM2.5 values > 9.0 µg/m³, or in the Code Yellow range or higher, may contribute to an exceedance of the EPA's annual PM2.5 standard.

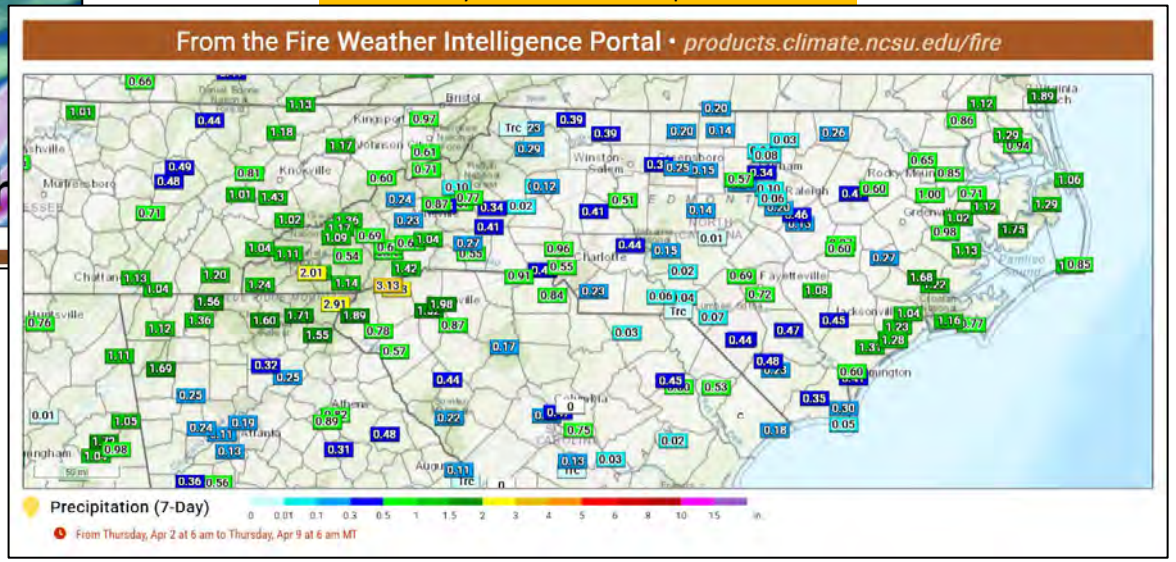
https://airquality.climate.ncsu.edu/discussion/?view=latest



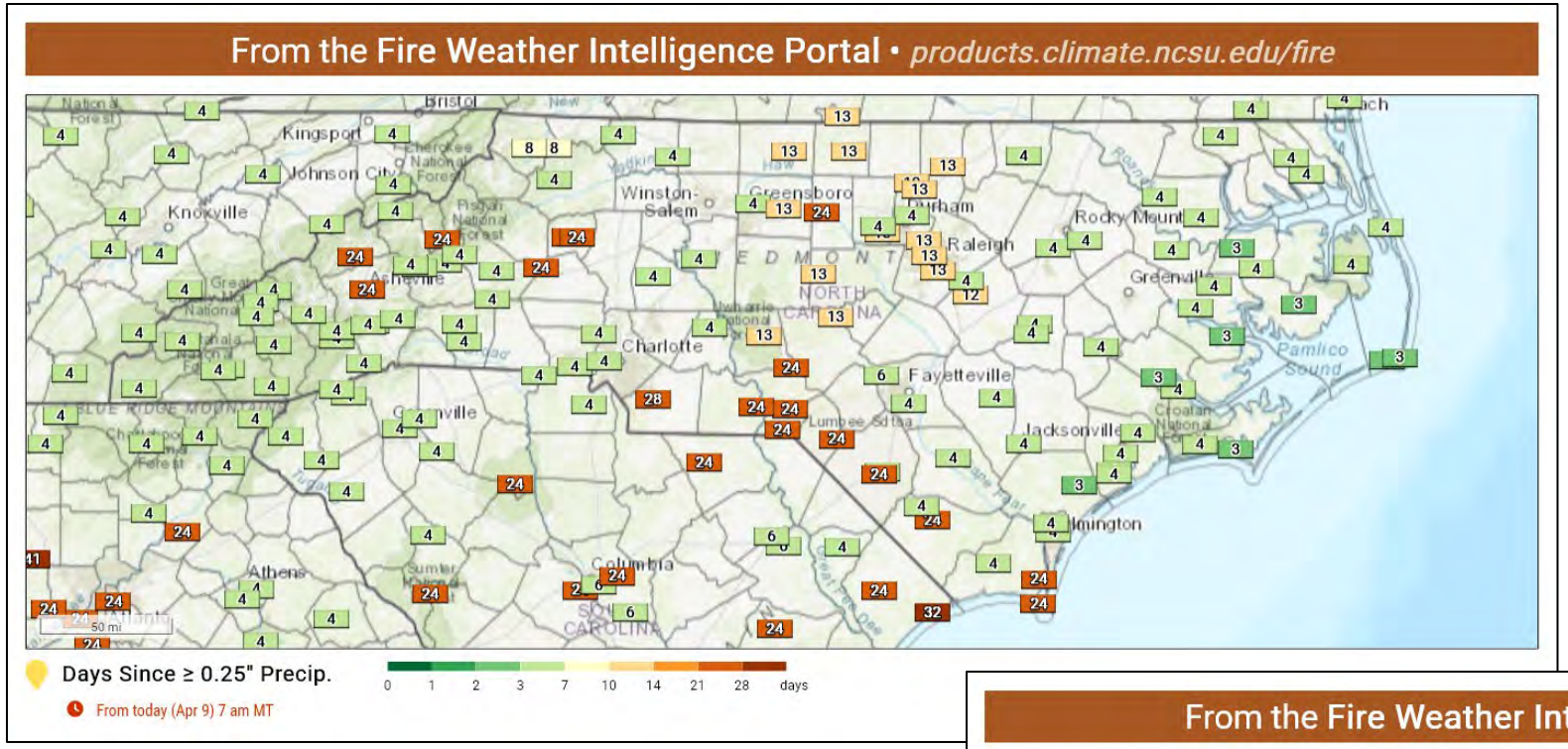
4-Month Departure from Normal (in.)



7-Day Station Precip Totals



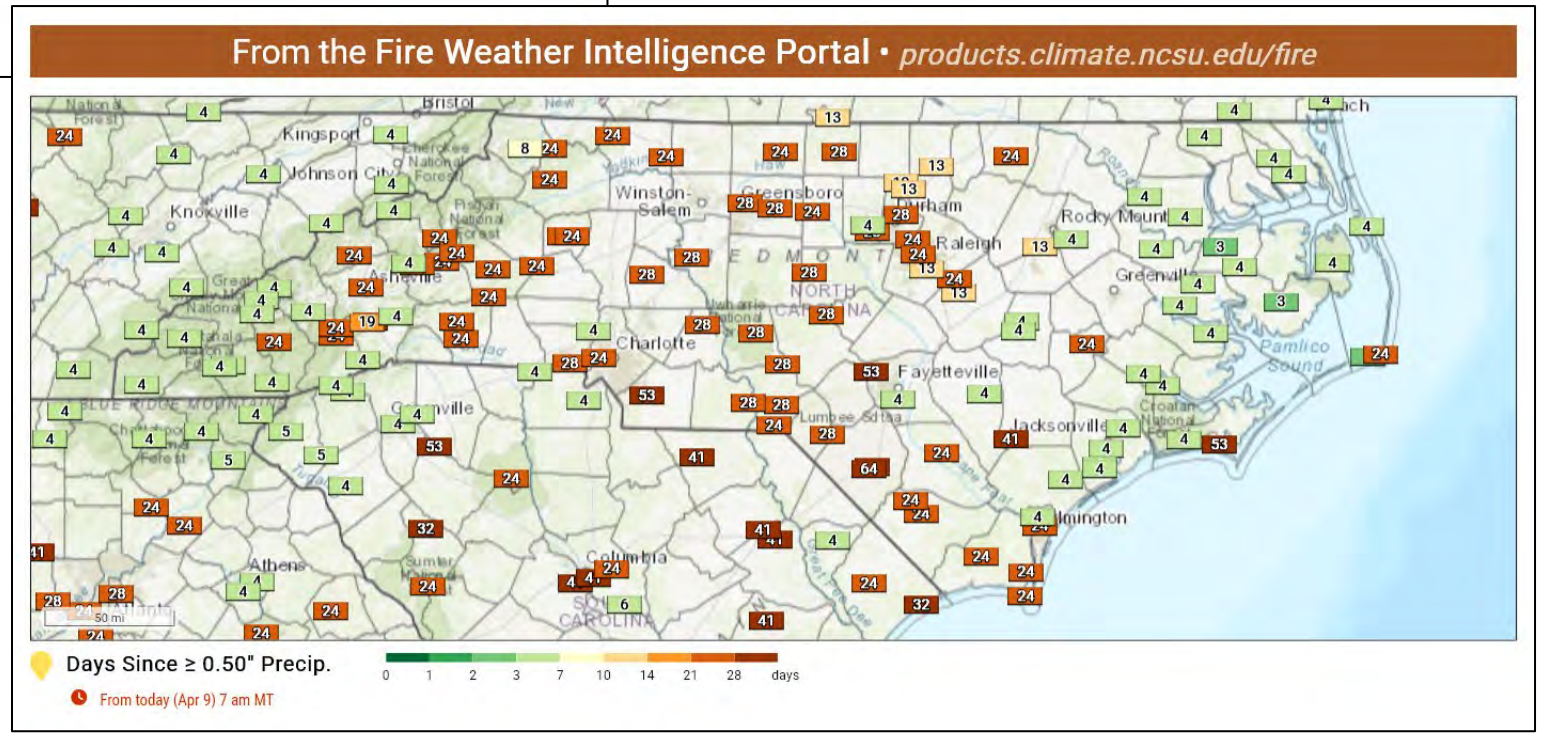
Very minimal/scattered amounts over the past week. Remember the underlying dryness at longer time scales. Departure from normal map models most areas at least 6-8 inches behind at the 4-mo scale, with some over 16 inches behind.



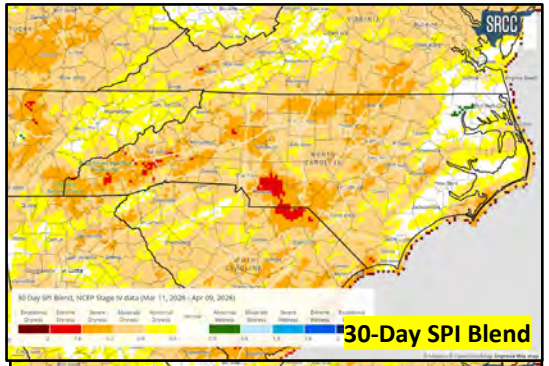
Days since ≥ 0.25” Precip Event

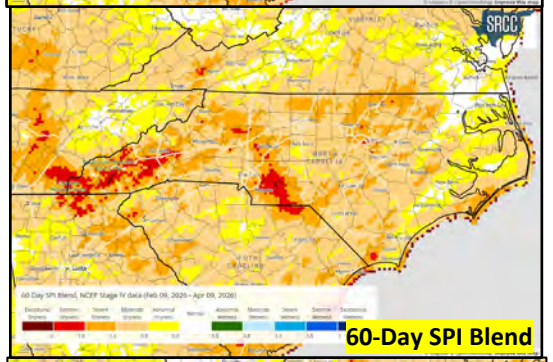
Although several areas received 0.50” + precip this past weekend, significant deficits remain at all time scales.

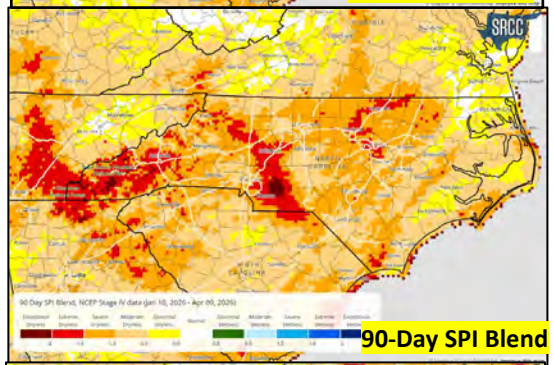
Days since ≥ 0.50” Precip Event

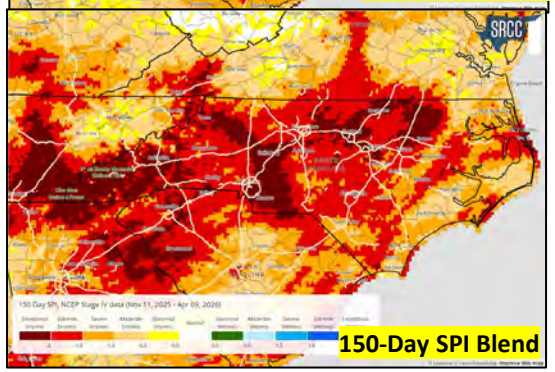


https://srcc.tamu.edu/water_portal/

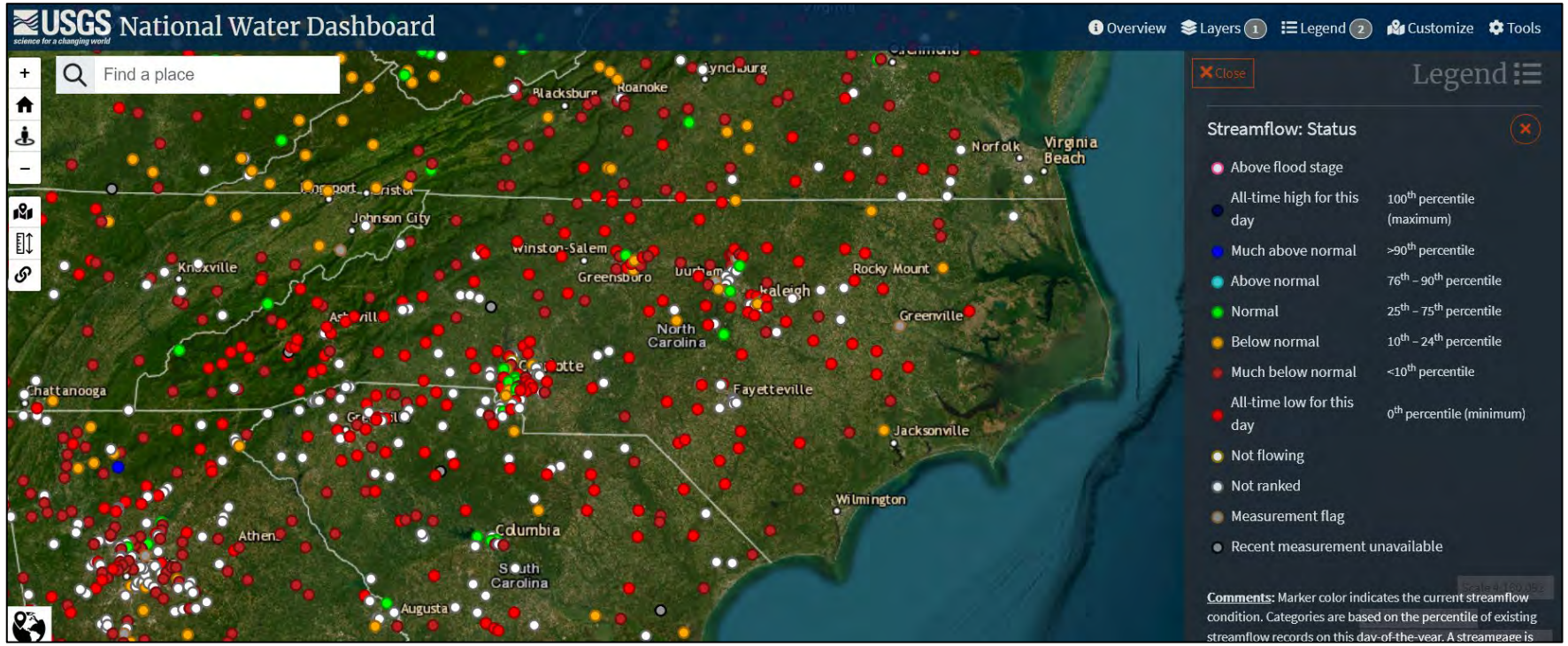








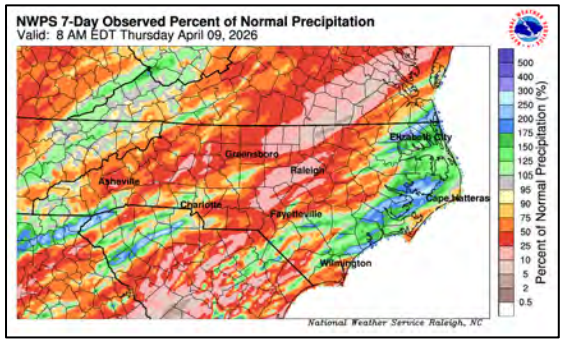
New USGS Streamflow Map: Real-time



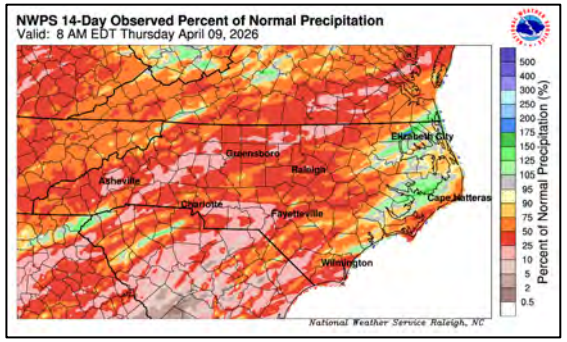
Another round of limited precip over the past 7-days continues to show response on the 30-day SPI map, offsetting earlier reductions. Longer time scale SPI products continue to indicate entrenched conditions. As dormancy break continues – expect further decreases in streamflow and lower duff/soil moisture.

Real-time streamflow from 4/9/26 shows return of "much below" to "all time" low flow conditions for many gauges in NC. This low-flow (especially in context of baseflow) trend continues to be very significant as we move towards the growing season/spring. Many swamps & larger canal networks are beginning to see further decreases in water levels as green-up progresses. Very high evaporative demands are likely over the next couple weeks, further drawing down soil water.

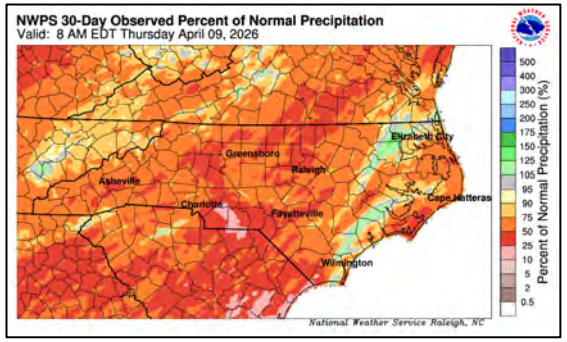
7-Day PNP



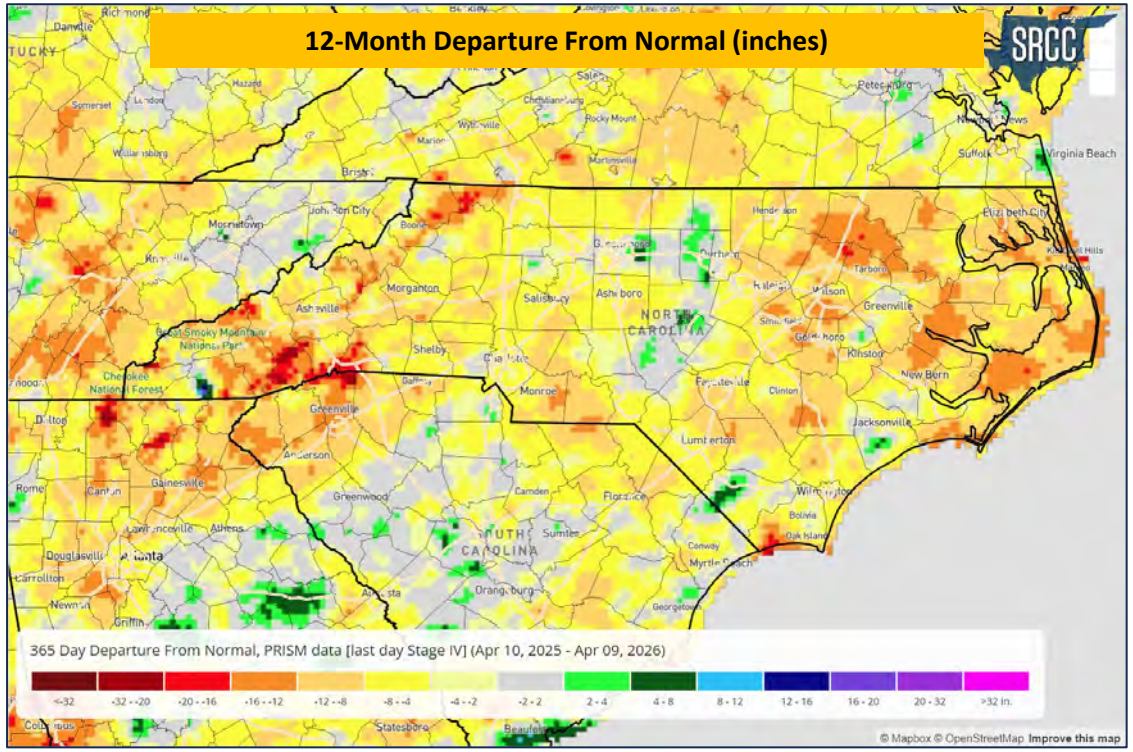
14-Day PNP



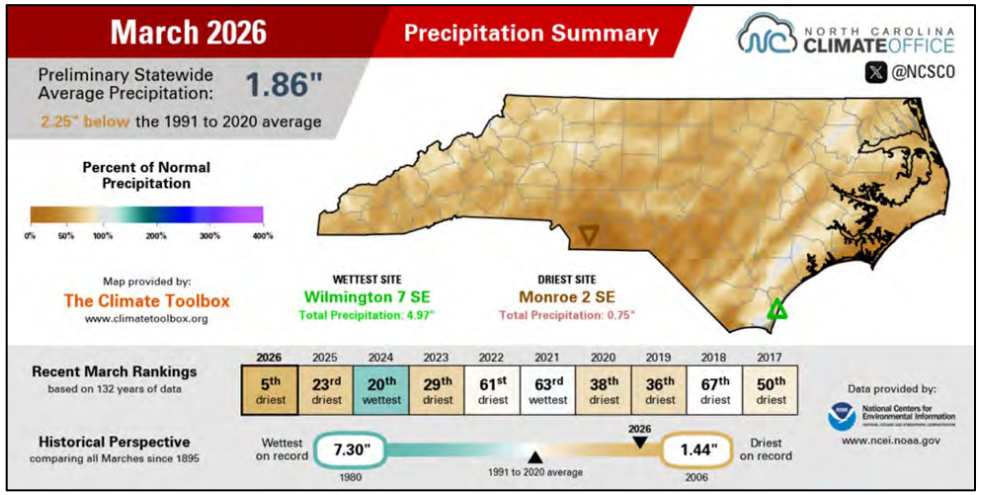
30-Day PNP



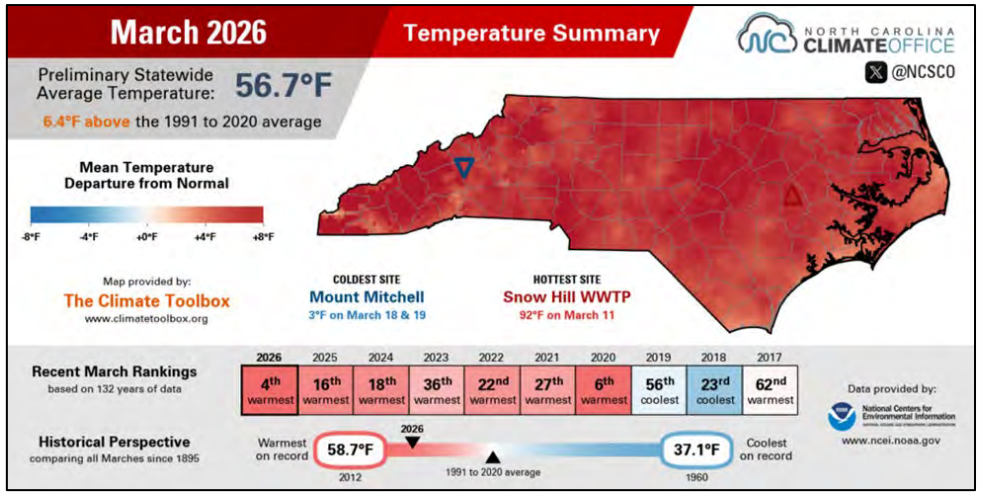
12-Month Departure From Normal (inches)

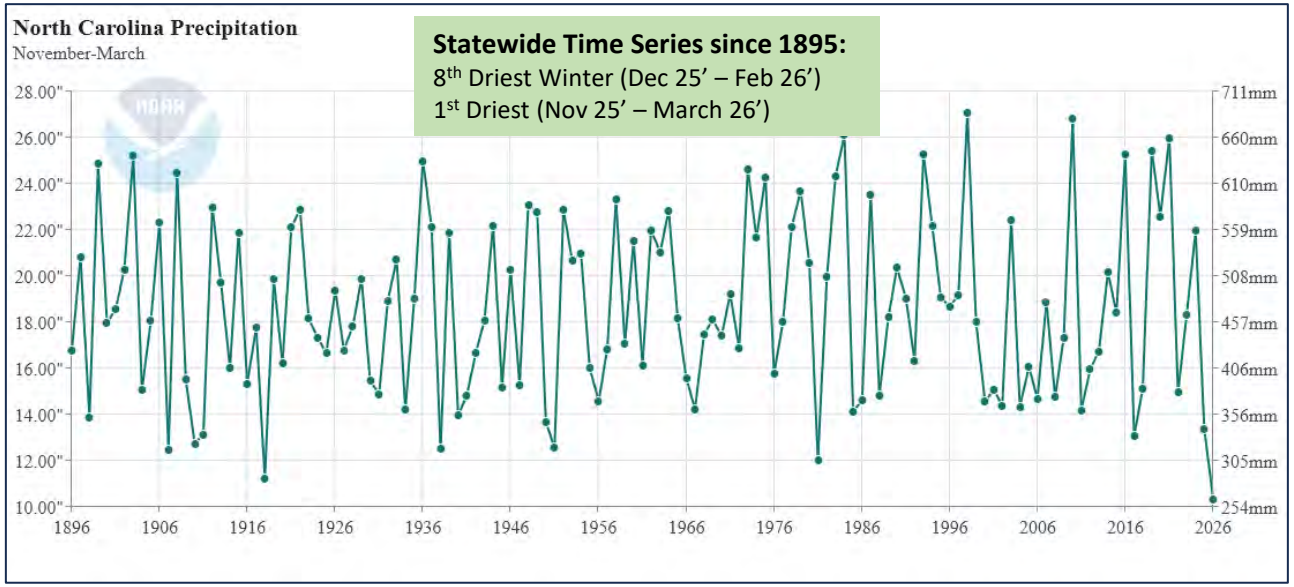


March Precip Summary

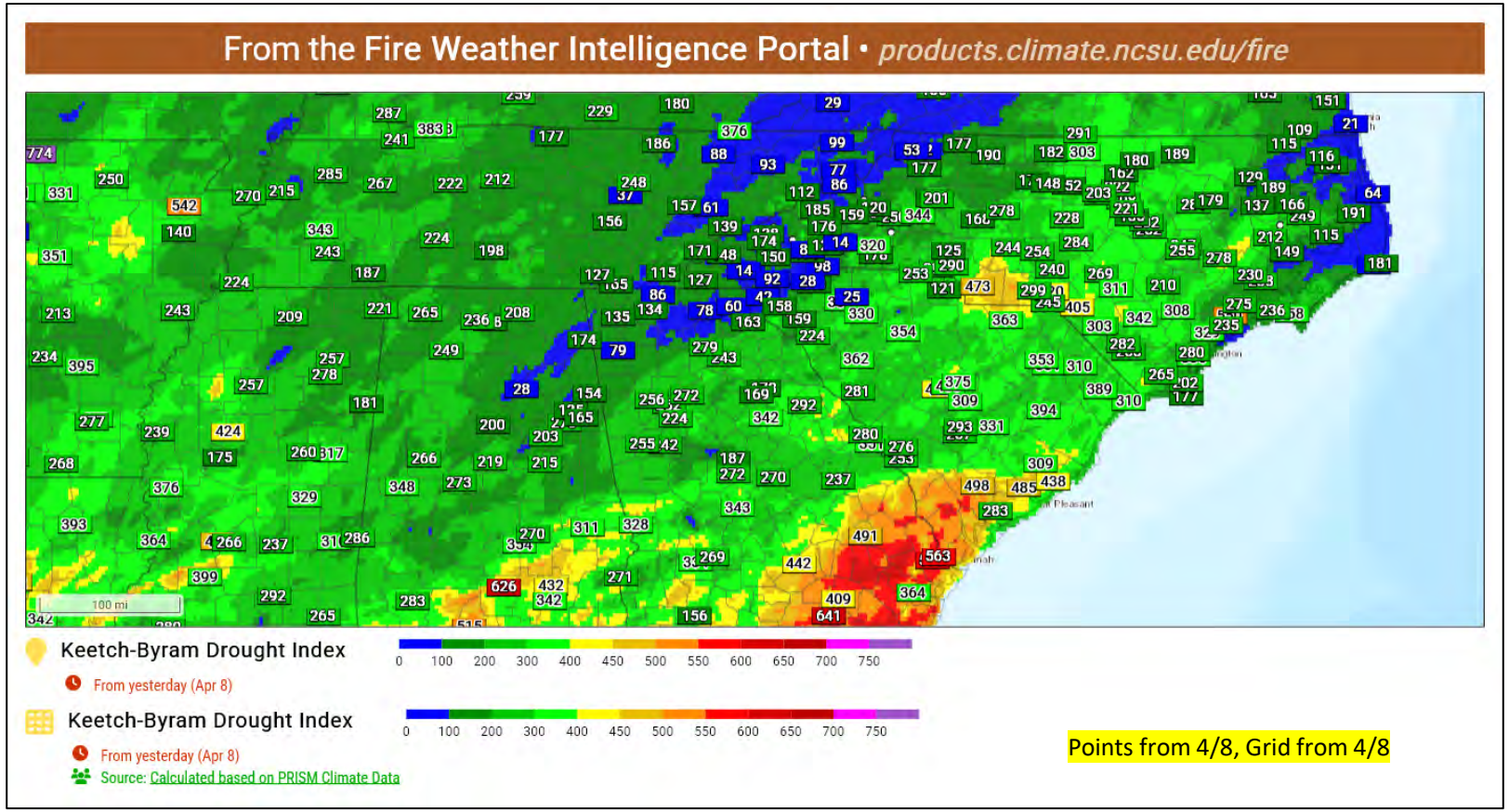


March Temp Summary

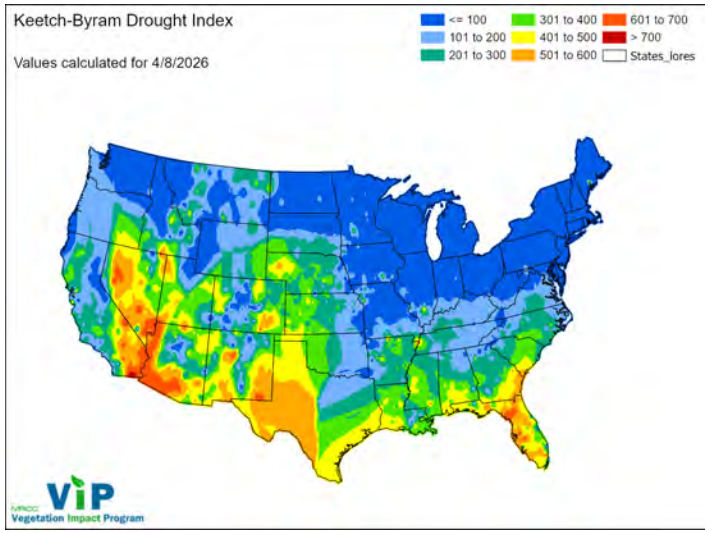


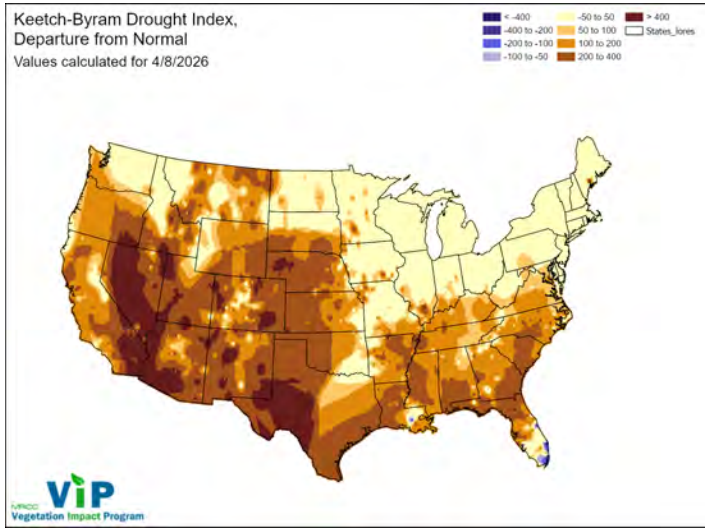


https://www.ncei.noaa.gov/access/monitoring/climate-at-a-glance/statewide/time-series/31/pcp/4/2/1895-2026



Points from 4/8, Grid from 4/8





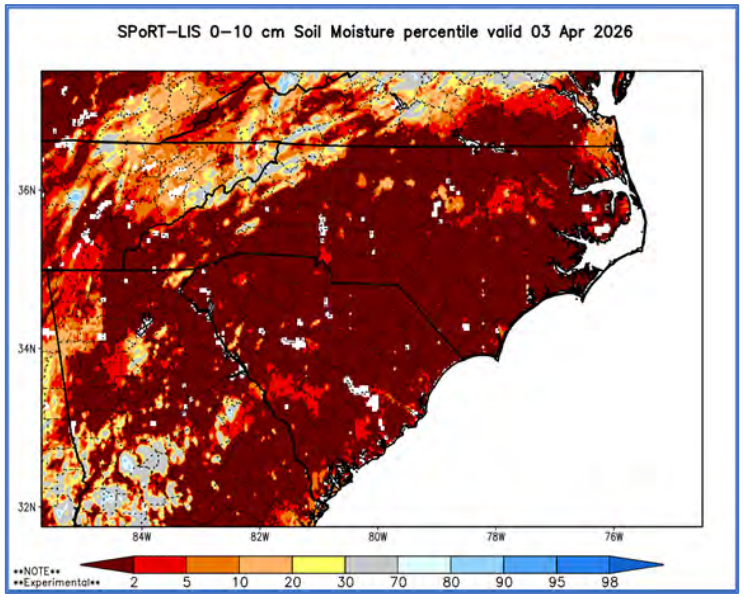
- KBDI is much less representative of the fire problem in the cold season, while max temperatures are low. A moderate rainfall can seemingly "erase" higher KBDI values, as the daily climb after the rain event is minimal (while true drought hasn't been erased). This metric is much more useful in the growing season. The map shows the impact of continued overall warm weather in daily expansion of KBDI values. Expect more rapid daily climbs when daily max temps rebound again.

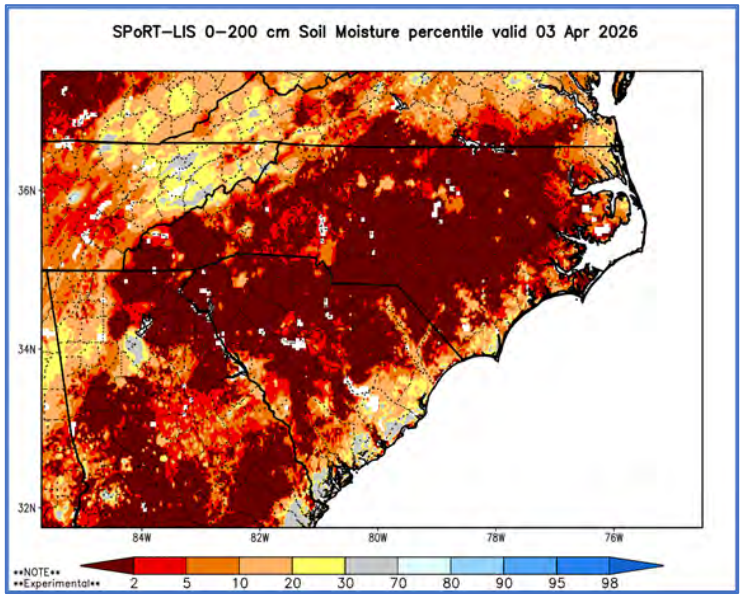
- Intense surface fire can still occur even with low KBDI values in the dormant season. Additionally, there are multiple areas still showing values in the 300's + on the gridded map above. The national maps to the right are calculated by MRCC, but paint a similar picture in a broader context.

https://mrcc.purdue.edu/VIP/indexKBDI2

SPoRT Modeled Soil Moisture Percentiles for ~4” and ~72” profile.

4/3/26

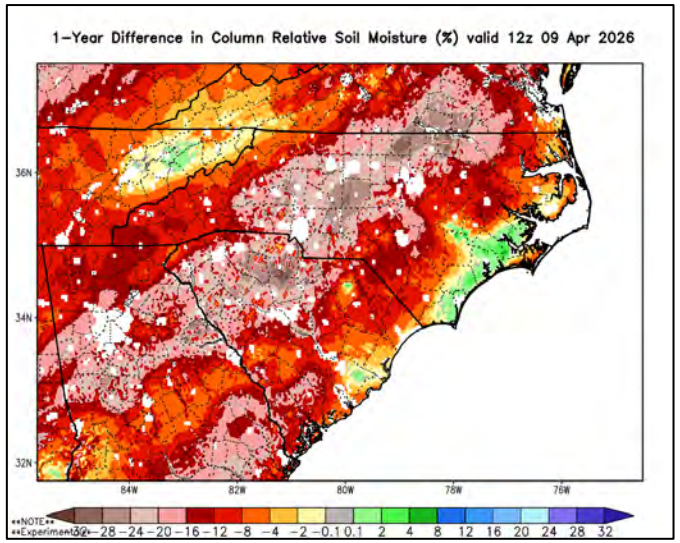




~ 1-Week ago Left, today on Right.
Just a model.

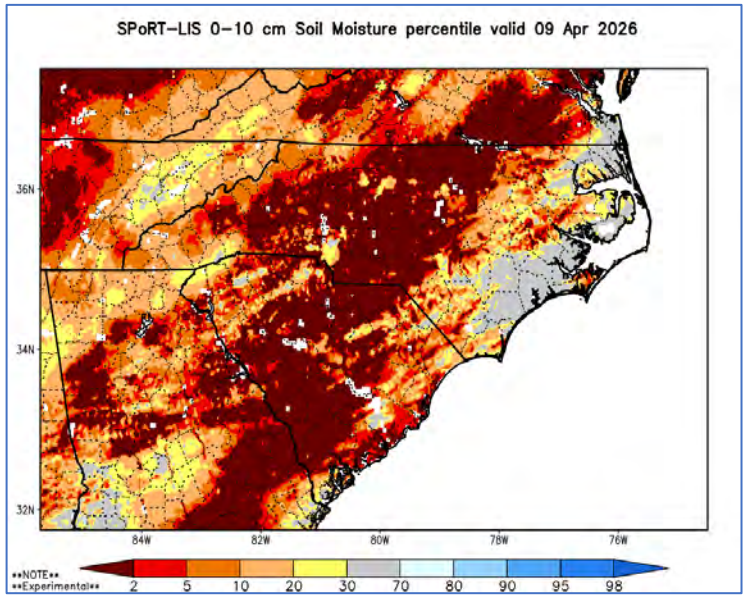
Another week of general drying.

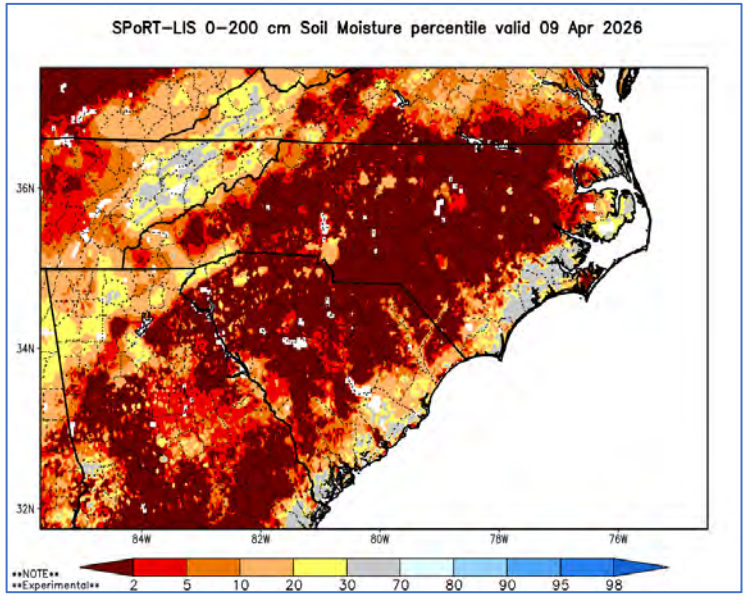
Note 1-year difference graphic below.



https://weather.ndc.nasa.gov/sport/case_studies/lis_NC.html

4/9/26





North Carolina Drought Update

Created By: North Carolina Drought Management Advisory Council www.ncdrought.org | NC CLIMATE OFFICE climate.ncsu.edu | NC STATE @NCSCO

For the assessment period ending **Apr. 7, 2026**

From the US Drought Monitor, with input from the NC DMAC

The Main Takeaway

Severe (D2) and Extreme (D3) Drought has expanded in parts of the state, including into Asheville, across the upper Yadkin Valley, and in the northern Coastal Plain.

This Week's Summary

Showers along last Sunday's cold frontal passage were generally light, except in a few parts of the Mountains and along the coastline. Even where that rain occurred, streamflows saw only a brief boost while groundwater levels continued to decline. The forecast isn't exactly promising, with no precipitation expected this week, plus warm weather that will evaporate more moisture.

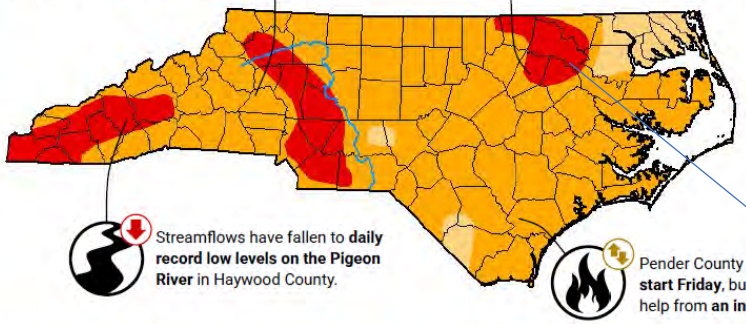
Next Week's Outlook

As high pressure builds over us, our rain chances will be essentially zero this week. Temperatures will reach the 80s this weekend and possibly 90°F by Wednesday.

For your local drought status, visit **www.ncdrought.org**

Hickory is off to its 3rd-driest start to a year on record, with just 53% of its normal precipitation.

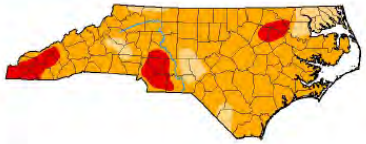
The town of Nashville is requesting voluntary water conservation, including by limiting lawn watering to early morning and evening hours.



Streamflows have fallen to **daily record low levels on the Pigeon River** in Haywood County.

Pender County saw a **147-acre wildfire start Friday**, but it was contained with help from **an inch of rain on Sunday**.

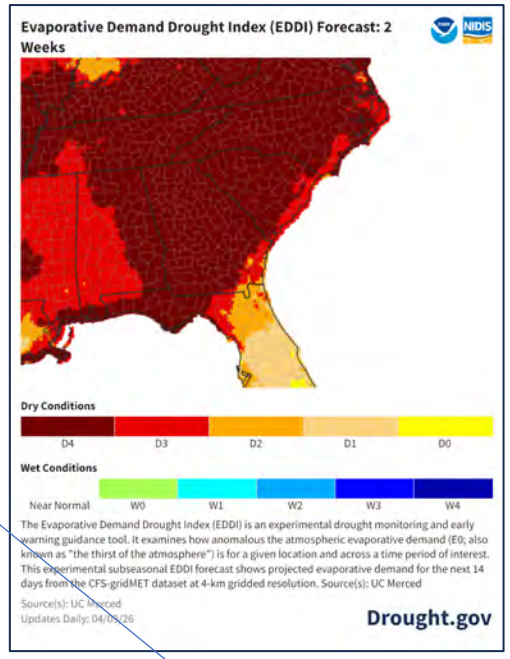
Last Week's Drought Status

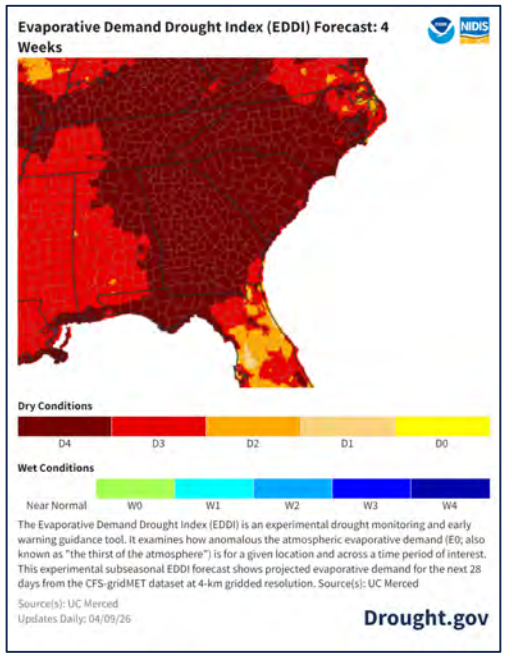


Statewide Coverage by Category

Category	Current Coverage	Change Since Last Week
D0: Abnormally Dry	0.00%	0.00%
D1: Moderate Drought	6.21%	-4.39%
D2: Severe Drought	77.09%	-2.67%
D3: Extreme Drought	16.70%	+7.06%
D4: Exceptional Drought	0.00%	0.00%

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





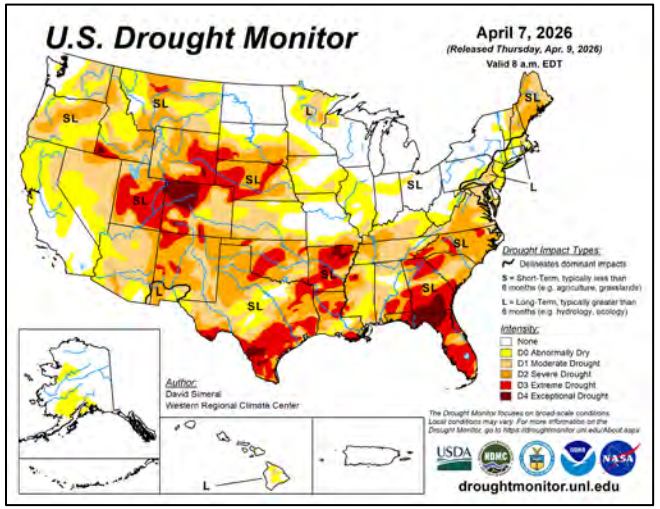
EDDI & Drought

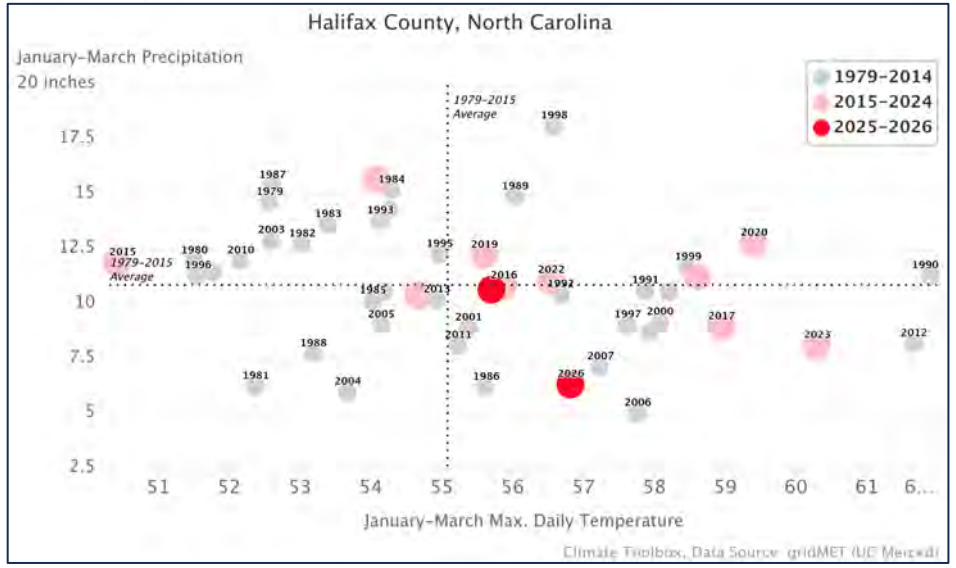
EDDI Maps - The EDDI maps at the top right illustrate modeled evaporative demand at the two-week and four-week avg level. They are trending much drier than normal for NC in the 2 & 4-week time scale. Warmth, lack of precip and dry air accelerates this index.

US Drought Monitor – Most recent USDM map release above (4/7/26). Drought intensification continues to be probable as we move into the growing season, should rainfall deficits continue.

Seasonal Drought Outlook - See detailed state/regional discussions here.

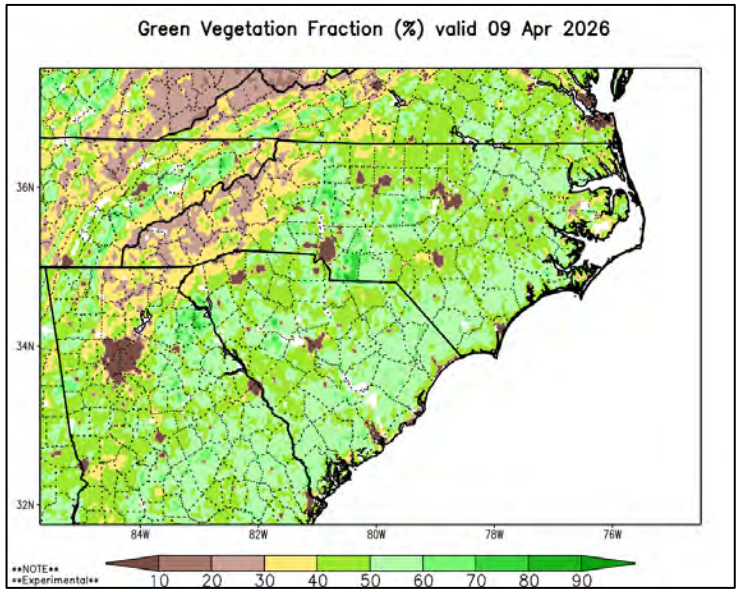
Climate Scatter Plot Graphic – Halifax County as an example of Jan-March avg precip vs max daily temp (date range 1979 – 2026).

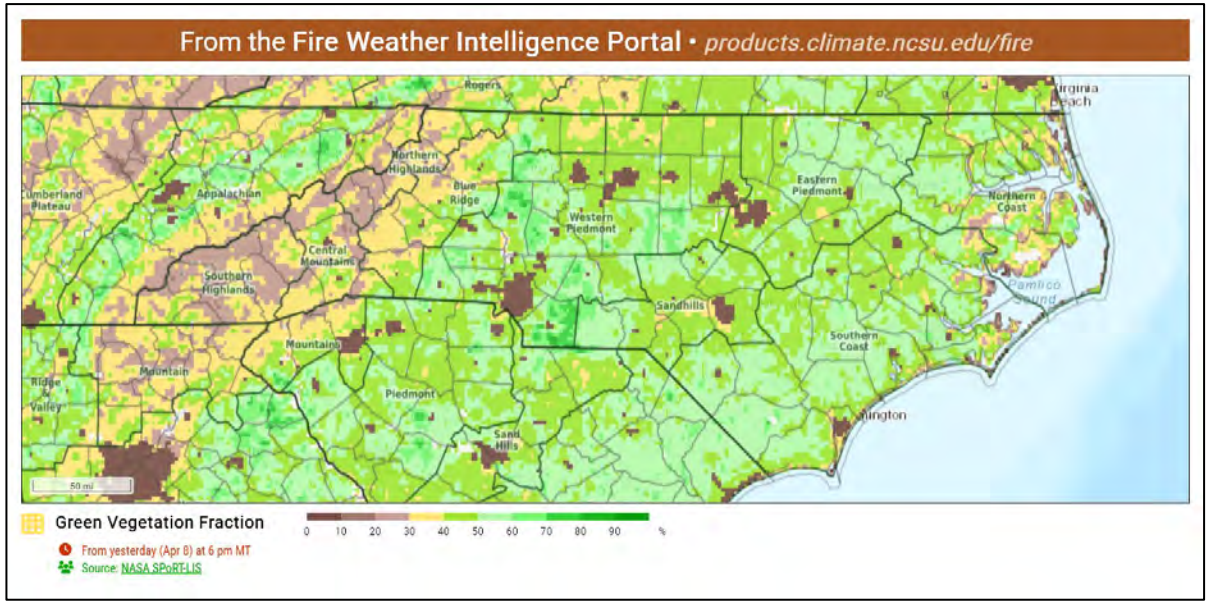


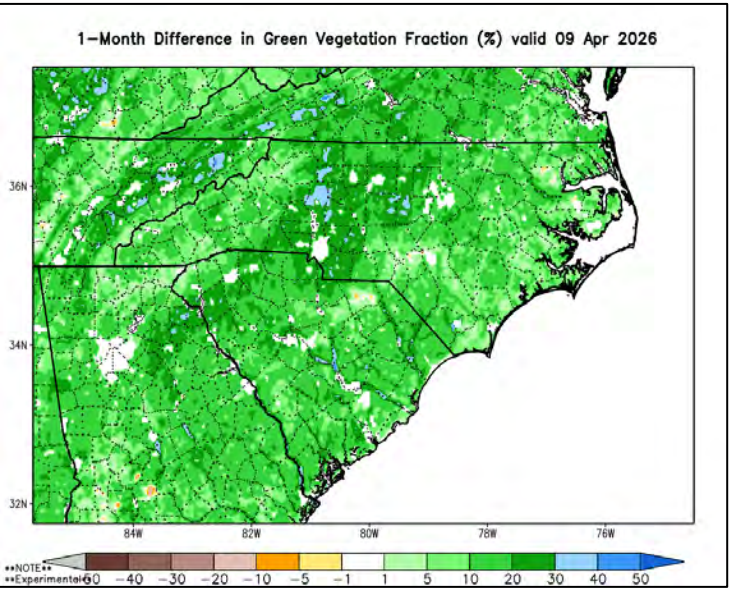


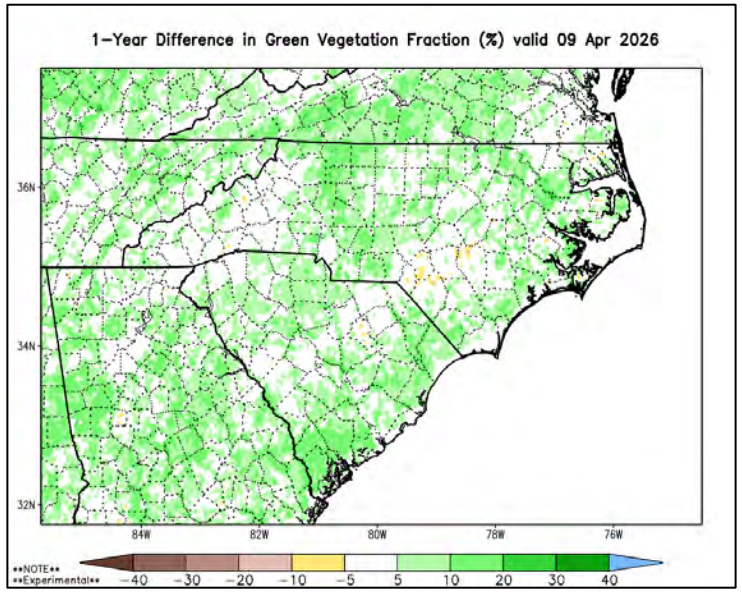
https://climatetoolbox.org/tool/Historical-Climate-Scatter

SPoRT Modeled Green Vegetation Fraction









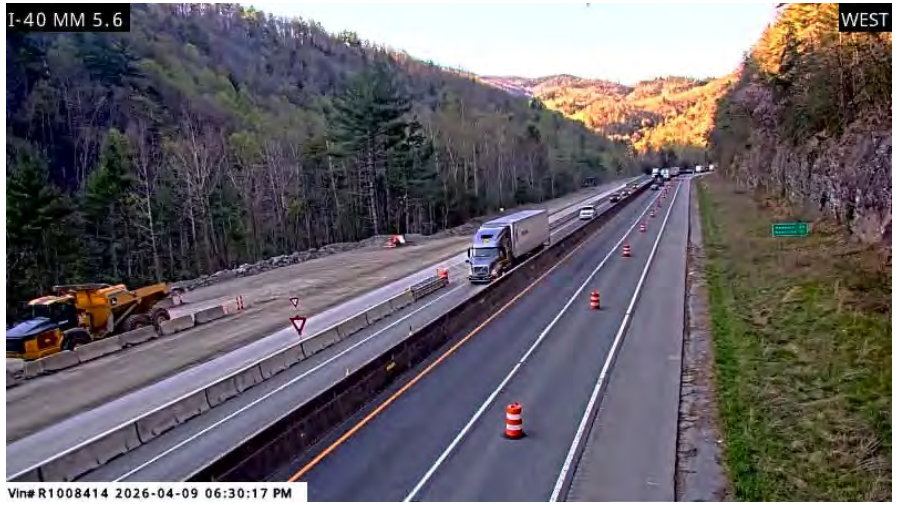
The daily GVF graphic show an increase in overall greenness across the state (top left), some lower elevation areas approaching 60-80%. The 1-mo difference graphic helps track movement/progression across the landscape (bottom left). The 1-year difference graphic shows some areas generally being about 5-10% further along then last year at the same time. Actual greenness depends on species, aspect, freeze/frost/drought impacts; progressing from south to north & lower to upper elevation.

Higher GVF values **should not** be interpreted as meaning "effective green" and lower forest volatility at this point in seasonal progression.

The map above displays GVF with county and FDRA boundaries. Another round of cold overnight conditions has occurred this week, likely affecting more sensitive species at high elevations.

Vegetative Greenness – Examples across the State

https://drivenc.gov/#



Yard & road shoulder grasses are generally "green" with higher moisture contents. Moisture content will likely begin to decrease as we go into an extended period of warmth, high evaporative demand, and limited/no precip.

Hardwood leaf out remains most significant in lower elevation areas.

Highly Generalized levels:

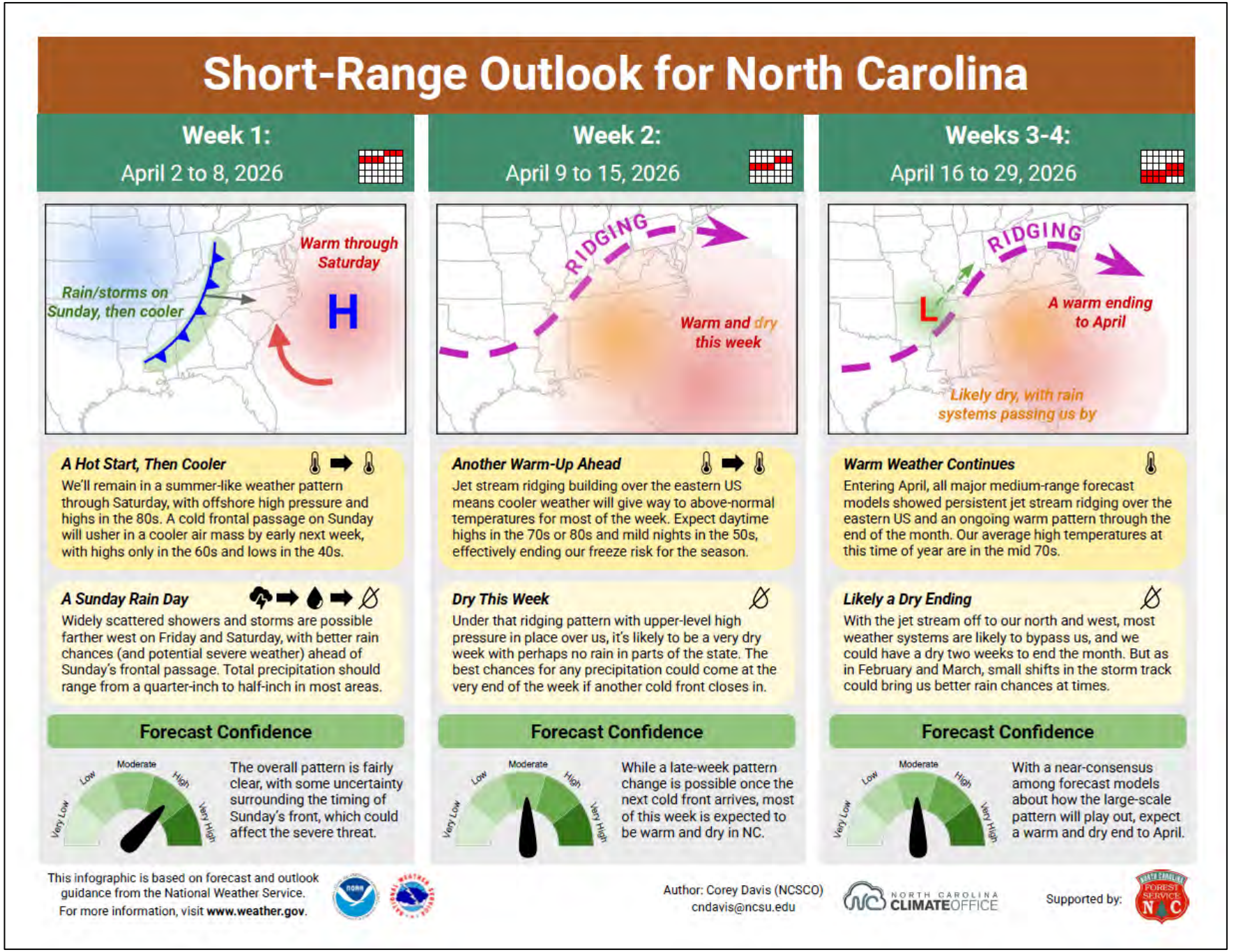
Coastal/Eastern Piedmont – 75-90%
Central Piedmont – 60-90%
Lower Elv. Mtns & Foothills – 60-80%
Mid Elevation – 40-60%
High Elevation – 15-30%

Volatility of forest fuels will remain significant until forest canopy closes, drought conditions are abated (live, dead fuel, and duff recharge), new conifer growth and waxy leaved shrubs reach maturity later this spring.

Alignment of fire effective weather with drought impacted fuels will continue to lead to enhanced difficulty of control, especially in areas of Helene or other damage with abnormally dry duff, 100-hr and 1000-hr fuels.

State Climate Office: Short-Range Monthly Outlook for NC

Released ***4/2/26***
Location: https://climate.ncsu.edu/fire/outlooks/

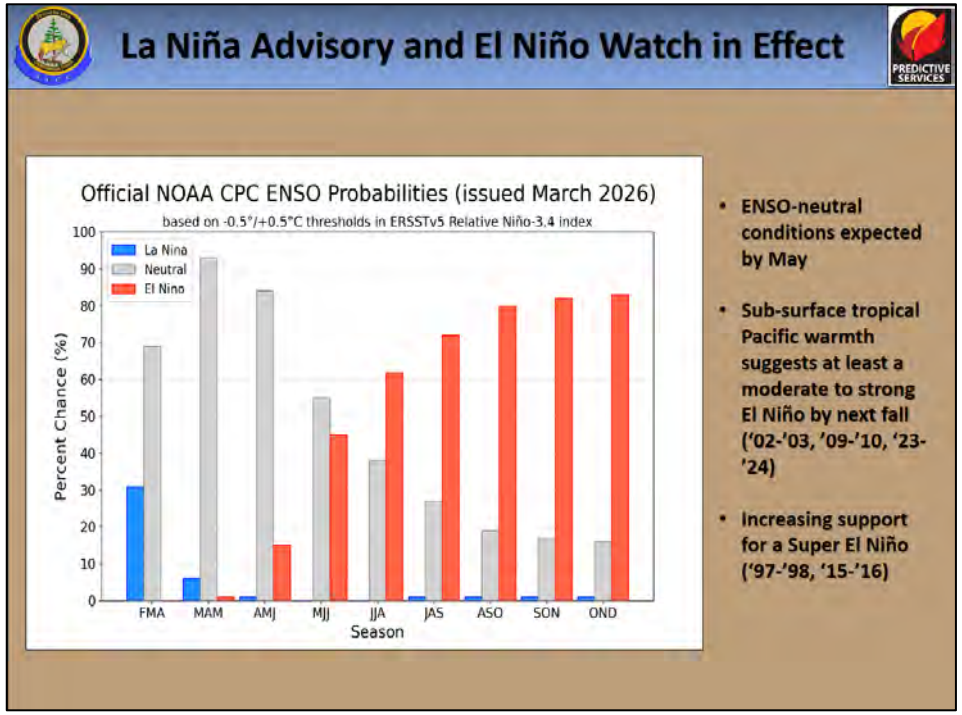


ENSO Notes from the CPC (4/9/26 Update)

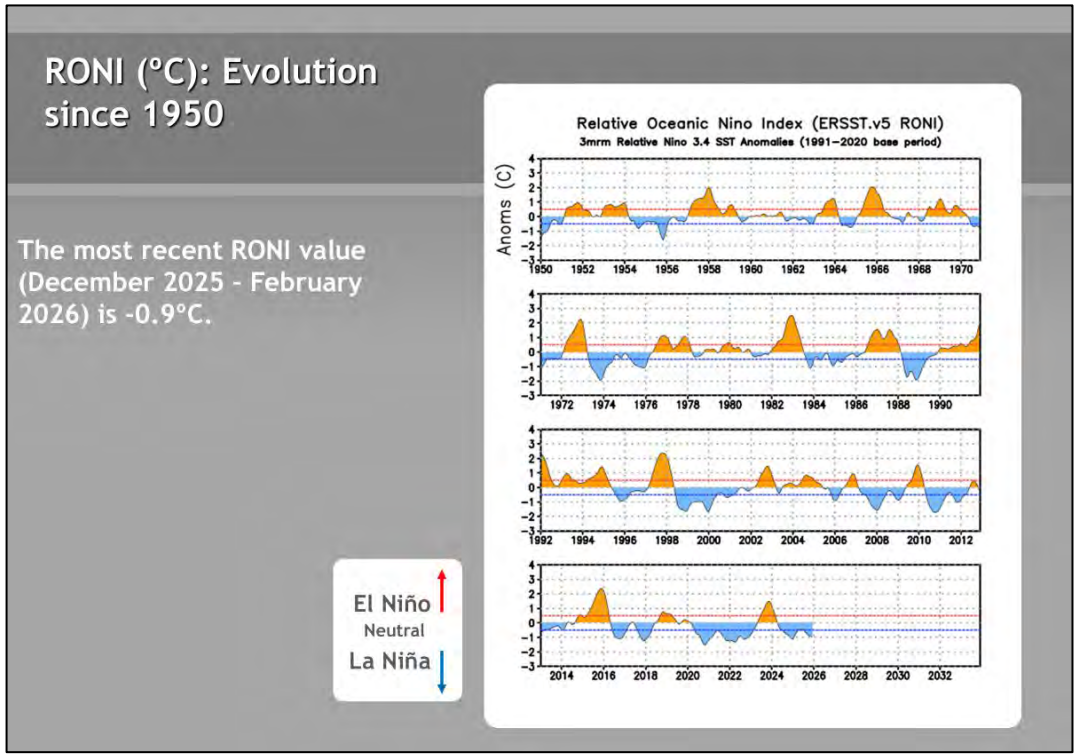
ENSO Alert System Status: **Final La Niña Advisory / El Niño Watch**

ENSO-neutral conditions are present and are favored through April-June 2026 (80% chance). In May-July 2026, El Niño is likely to emerge (61% chance) and persist through at least the end of 2026.

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. Recent changes in defining either ENSO state can be found here.



From SA Fire Environment Briefing 4/3/26



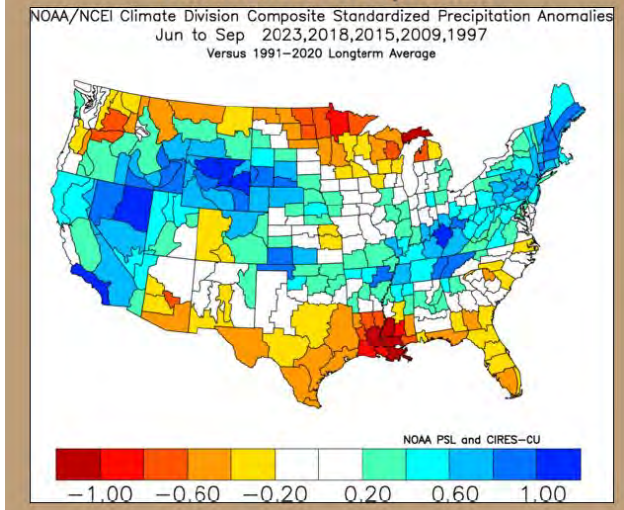
From the most recent CPC Diagnostic Discussion (ENSO Diagnostics Discussion):

The North American Multi-Model Ensemble (NMME) average, including the NCEP CFSv2 [Fig. 6], favors ENSO-neutral through April-June 2026, with a transition to El Niño thereafter. El Niño is likely because of increasing subsurface temperature anomalies and recent westerly wind anomalies over the western Pacific Ocean. However, the possible outcomes range from ENSO-neutral to a very strong El Niño during the upcoming Northern Hemisphere winter [Figs. 7 & 8]. The possibility of a very strong El Niño (1 in 4 chance of Niño-3.4 ≥ +2.0°C) largely depends on the continuation of westerly wind anomalies across the equatorial Pacific throughout the Northern Hemisphere summer months, which is not assured. In summary, ENSO-neutral conditions are present and are favored through April-June 2026 (80% chance). In May-July 2026, El Niño is likely to emerge (61% chance) and persist through at least the end of 2026.

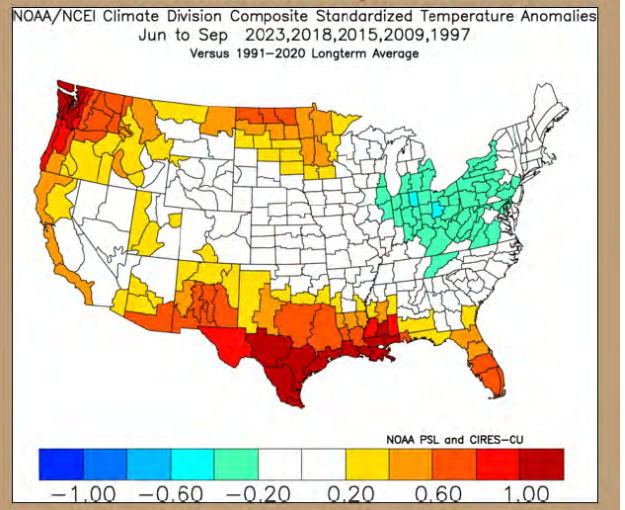
Slide Source: *https://www.cpc.ncep.noaa.gov/products/analysis_monitoring/lanina/enso_evolution-status-fcsts-web.ppt*

Summer Analogs

Standardized Precipitation

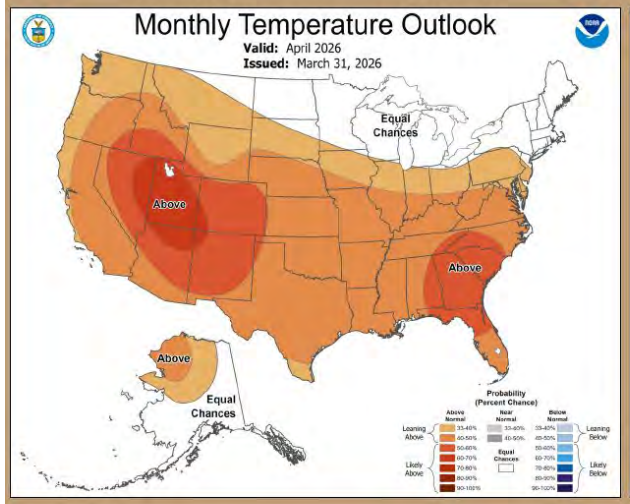


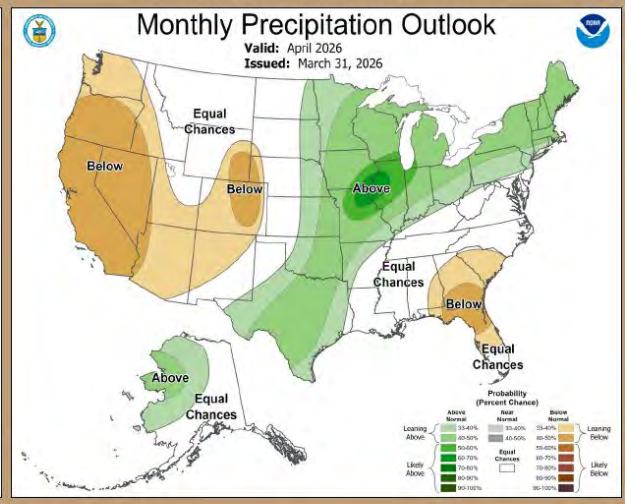
Standardized Temperatures



- Analogs for June to September, based on quick transition into a moderate/strong El Niño
- Strong signal for hot and dry conditions resulting in flash drought for the Gulf states
- Potentially wetter and milder across the northern tier
- El Niño usually increases shear over the Atlantic basin, but as in 2023, if Atlantic waters are also unusually warm, we could still see intense tropical cyclones

NOAA's April Outlook



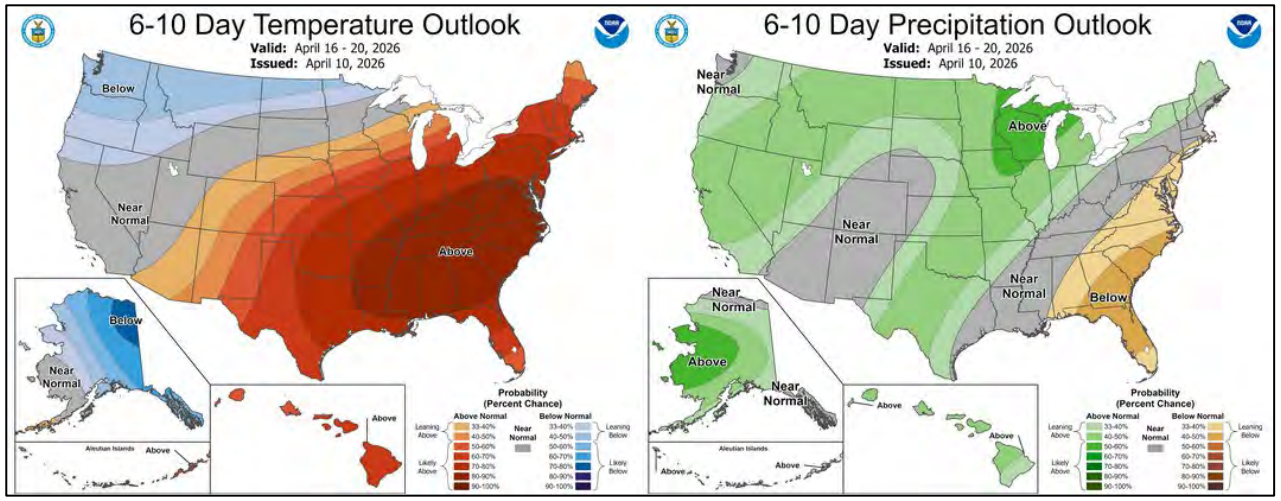


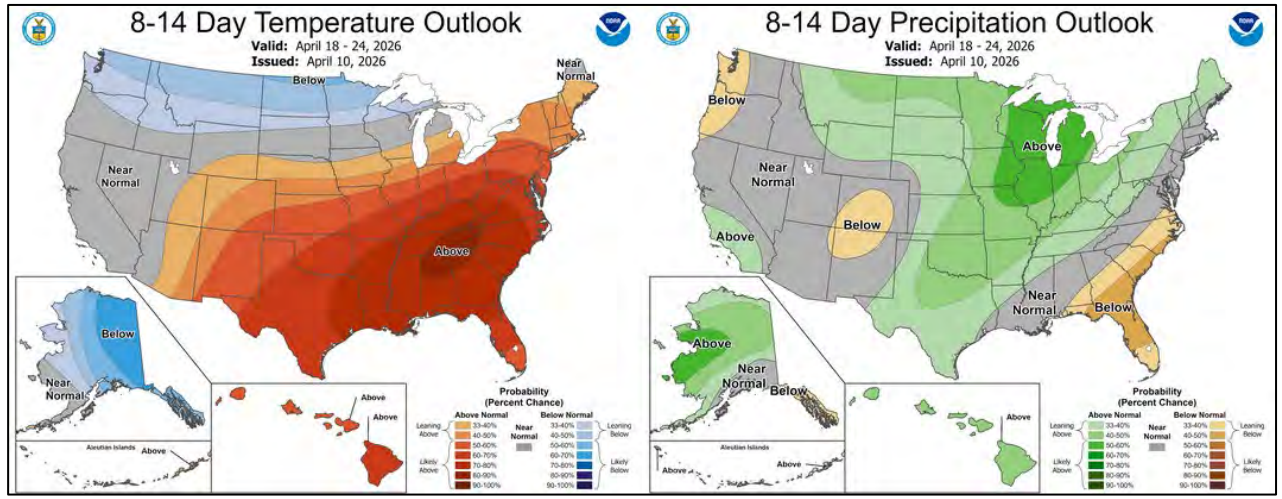
- Residual impacts from the weakening La Nina expected
- Drought intensifies across the Southeast due to above normal evaporative demand, warm temperatures and below average rainfall
- High Plains on the edge of relief

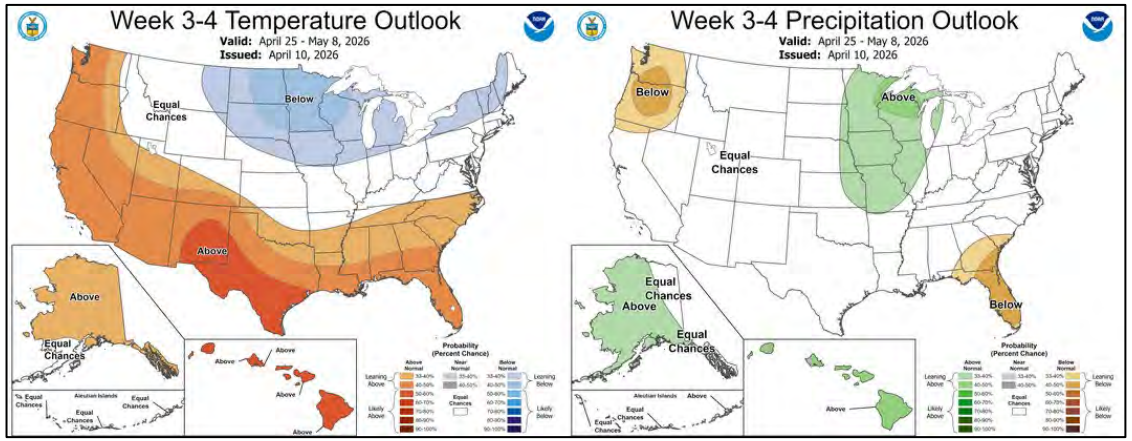
From SA Fire Environment Briefing 4/3/26

Temp & Precip Outlook

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







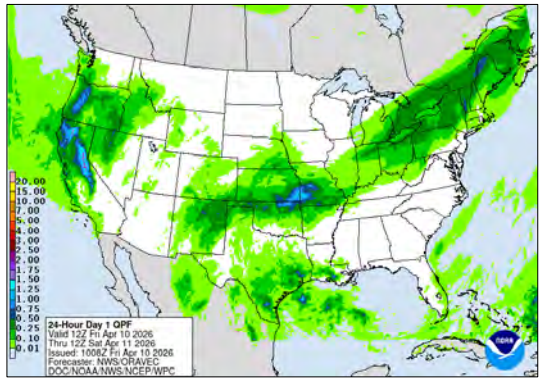
Source: https://www.cpc.ncep.noaa.gov/

https://www.cpc.ncep.noaa.gov/products/predictions/long_range/fxus05.html

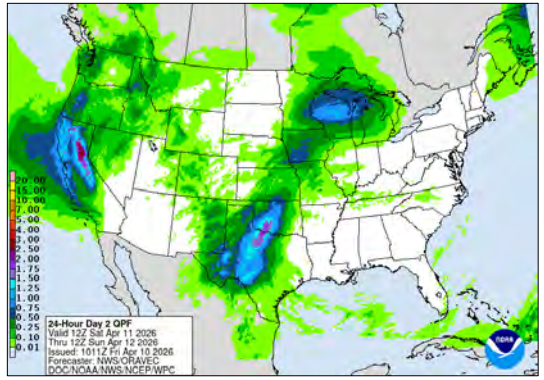
Quantitative Precipitation Forecast, 7-Day

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

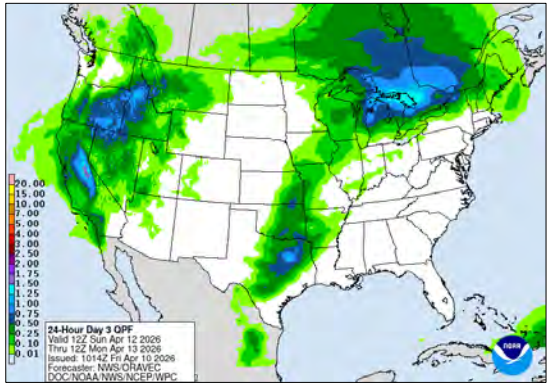
Day – 1



Day - 2



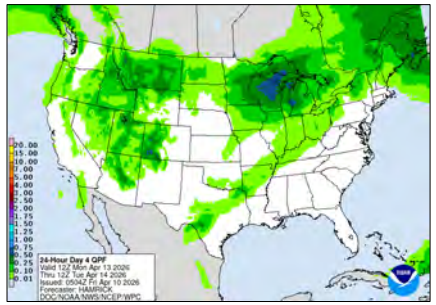
Day - 3



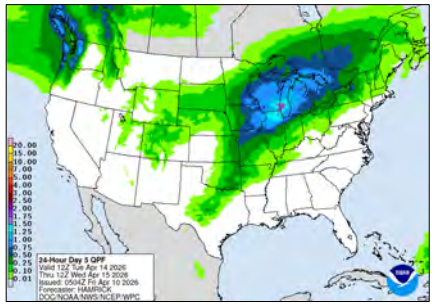
Zoom - Day 1 – 7 QPF

https://www.weather.gov/rah/nc#rain

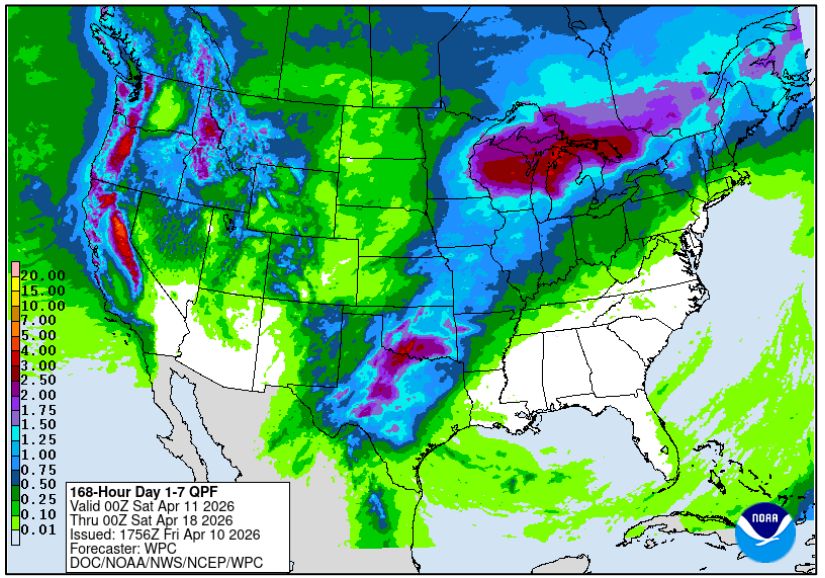
Day - 4



Day - 5

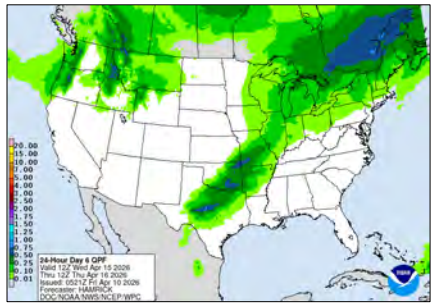


Days 1 – 7 QPF

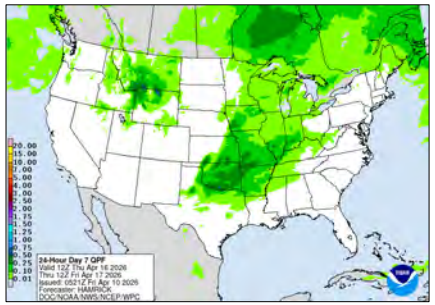


Limited chance of significant wetting rain over the next 7 days. Lightning risk should be considered as drought conditions worsen.

Day - 6

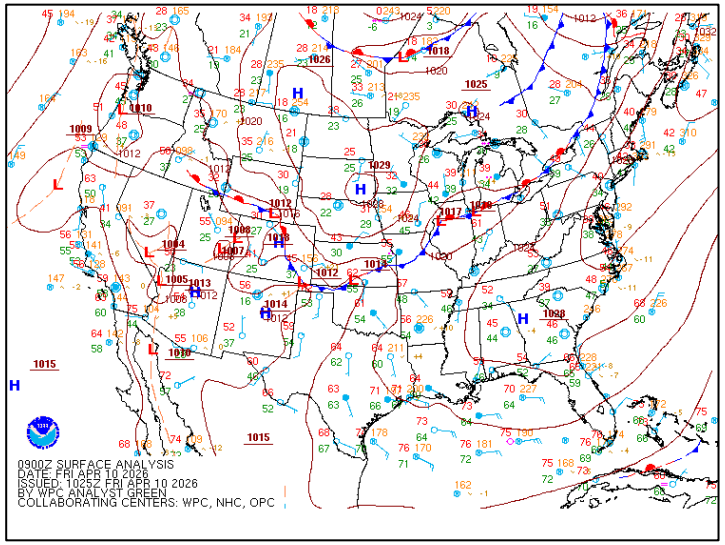


Day - 7

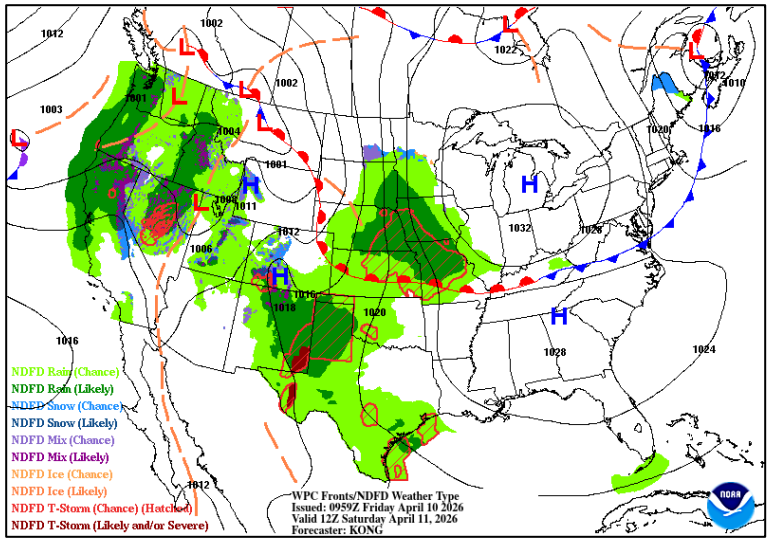


WPC Forecasted Surface Fronts & Sea-Level Pressures

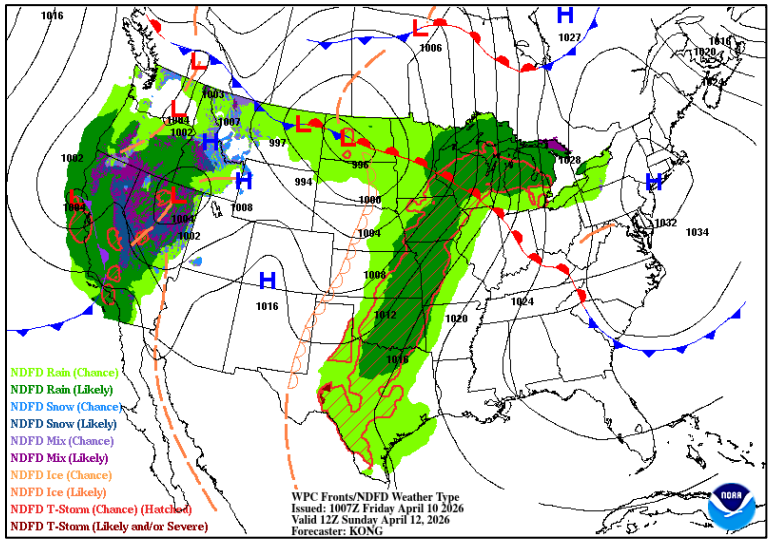
Day-1 @ 09Z Surface Analysis



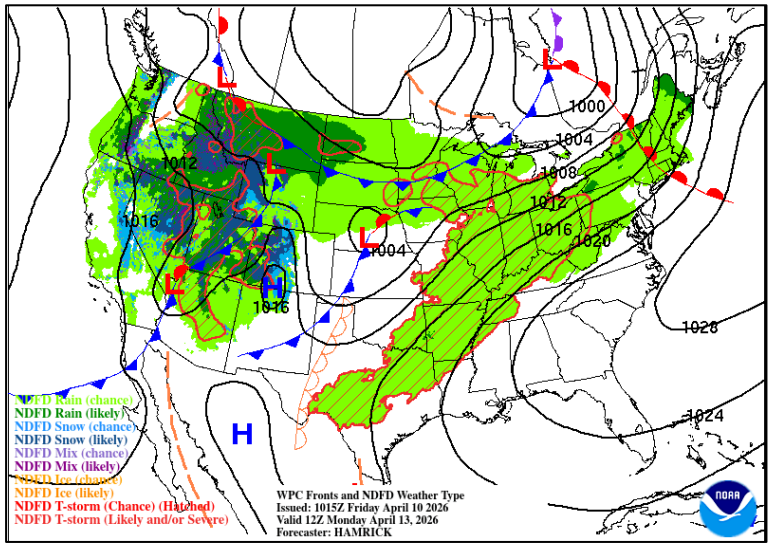
Day 2 - @ 12Z (0800 EDT)



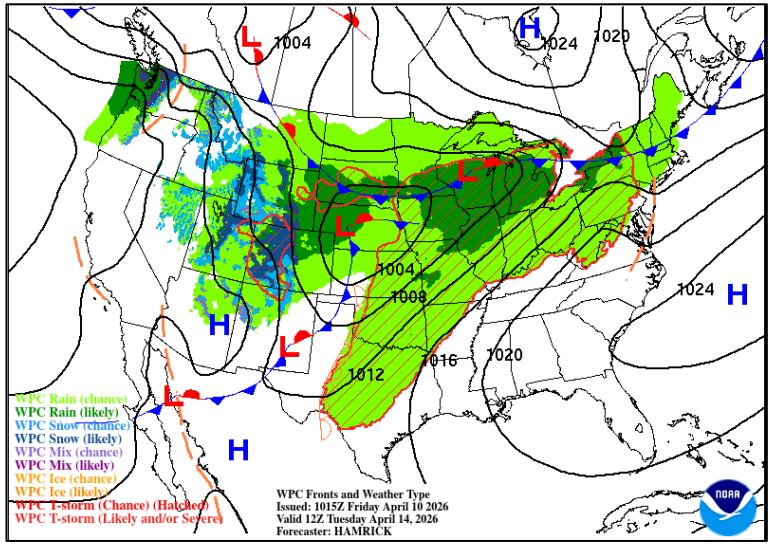
Day 3 @ 12Z (0800 EDT)



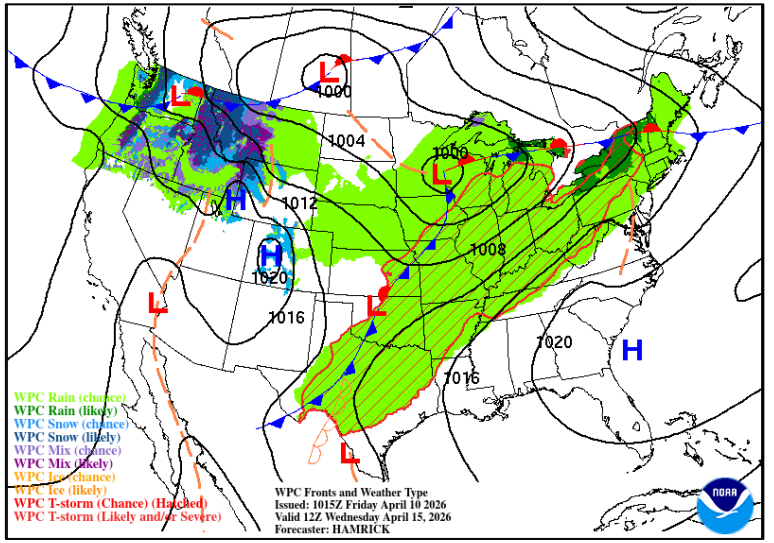
Day 4 @ 12Z (0800 EDT)



Day 5 @ 12Z (0800 EDT)



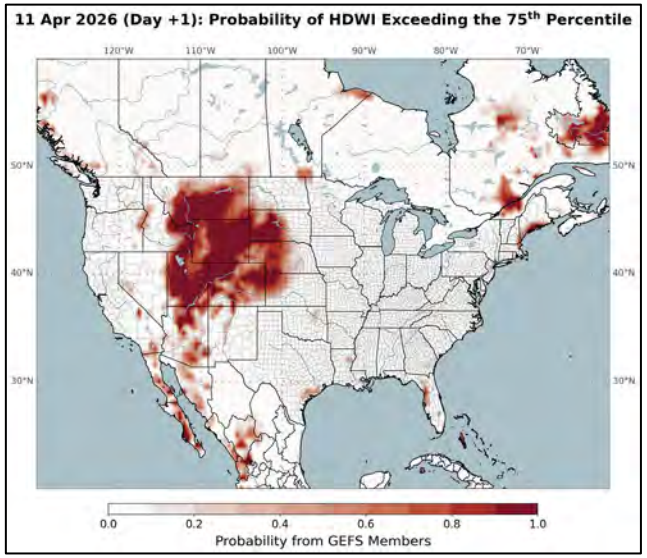
Day 6 @ 12Z (0800 EDT)



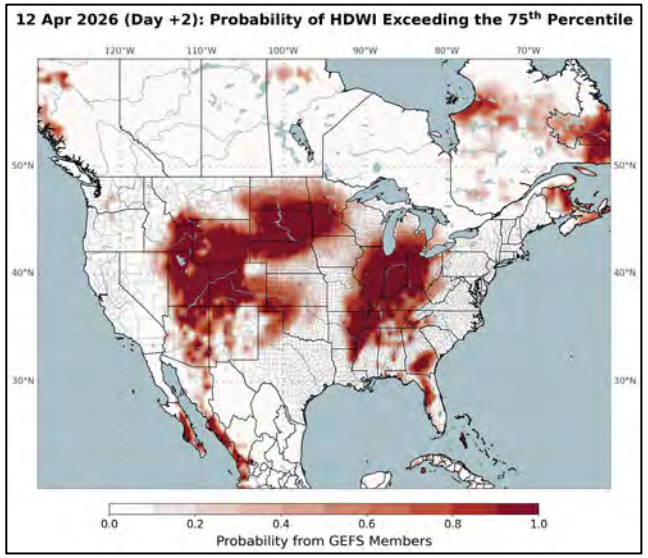
Location: https://www.wpc.ncep.noaa.gov/#

Hot-Dry-Windy Index (HDW)

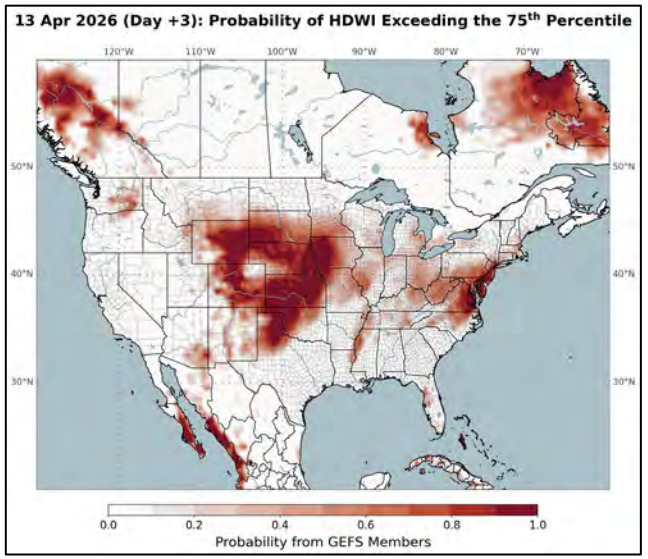
Saturday > 75th Percentile



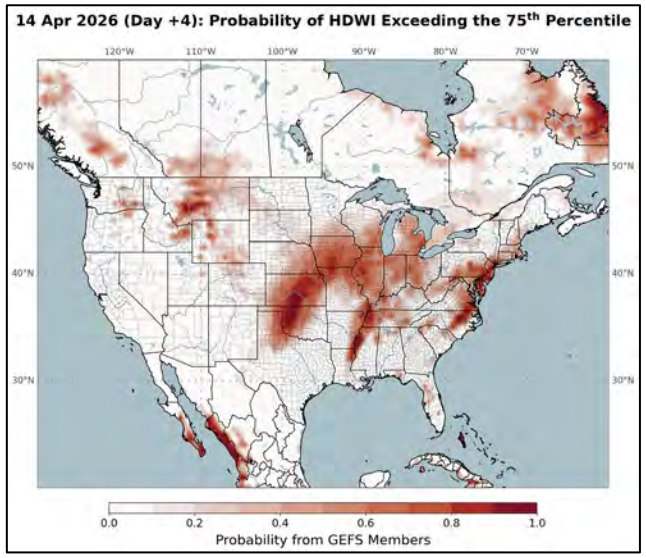
Sunday > 75th Percentile



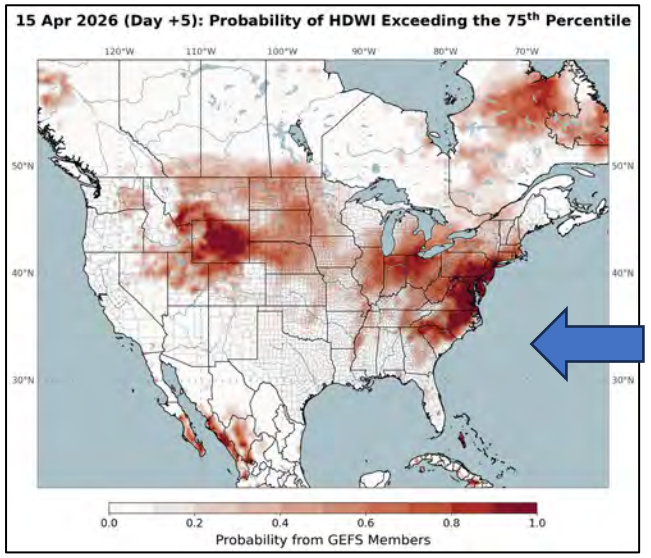
Monday > 75th Percentile



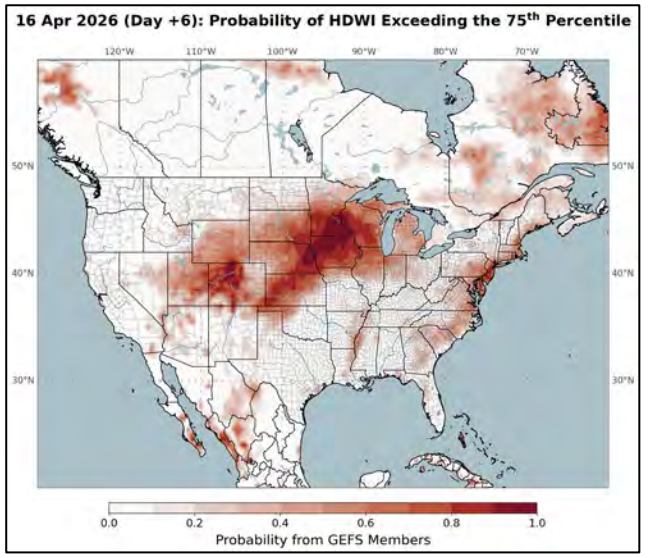
Tuesday > 75th Percentile



Wednesday > 75th Percentile



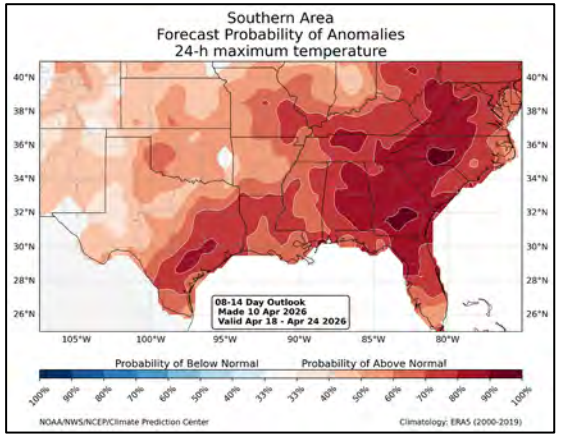
Thursday > 75th Percentile

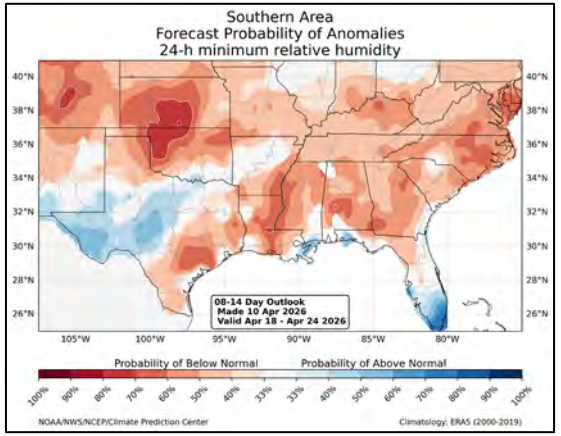


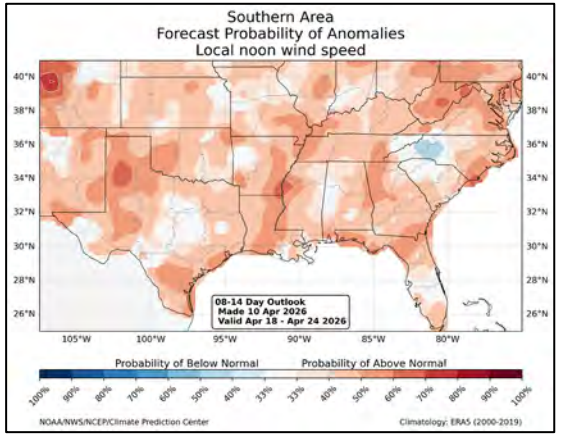
- Another visualization tool to pick up on broader weather, but with *limitations
- Only uses Max VPD (atmospheric moisture & temp) & Max Wind Speed to generate outputs
- Coarse Resolution - 0.5 Degree Grid
- No Account of Local Fuel Conditions and Topo

https://hdwindex.fs2c.usda.gov/probs.html

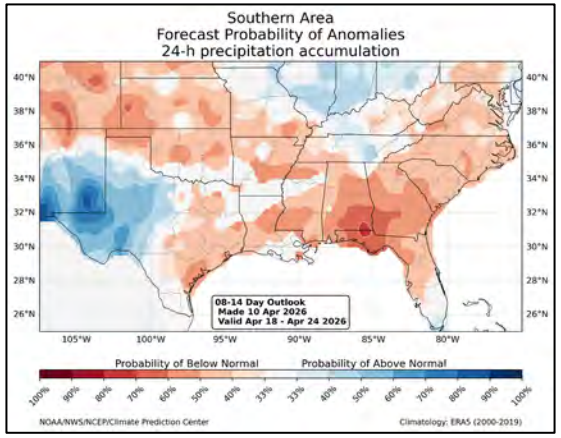
Week Two Forecast Anomalies: 4/18 – 4/24

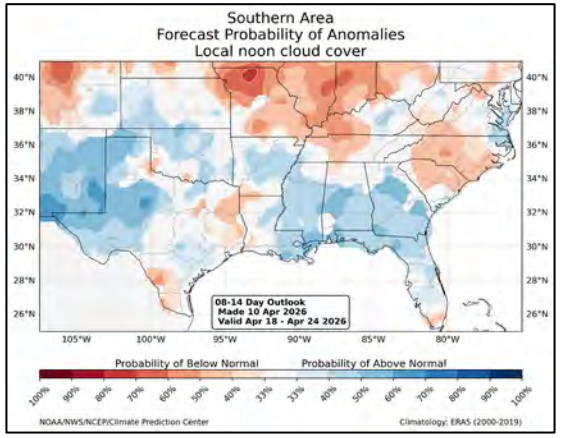






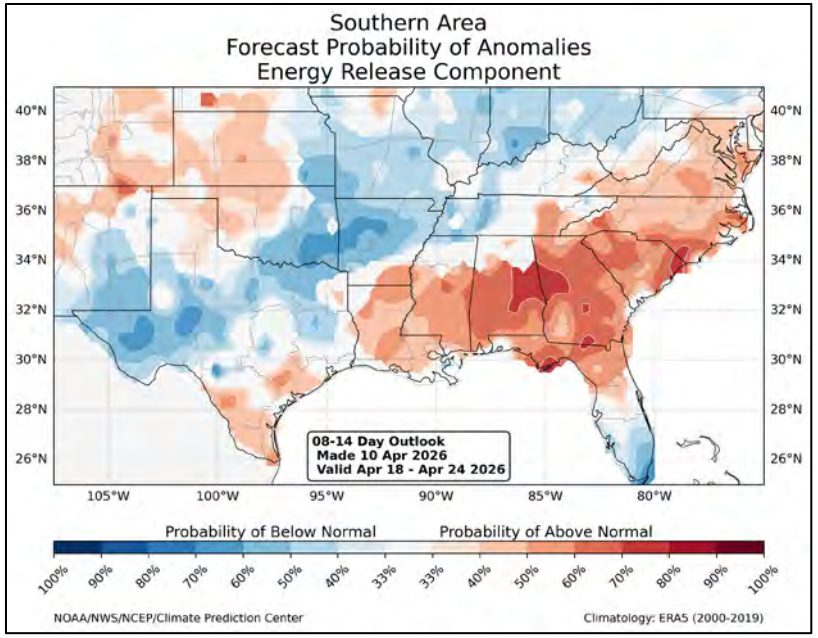
https://www.cpc.ncep.noaa.gov/products/extremes/fire-weather/cpc_wk2fw_index.html

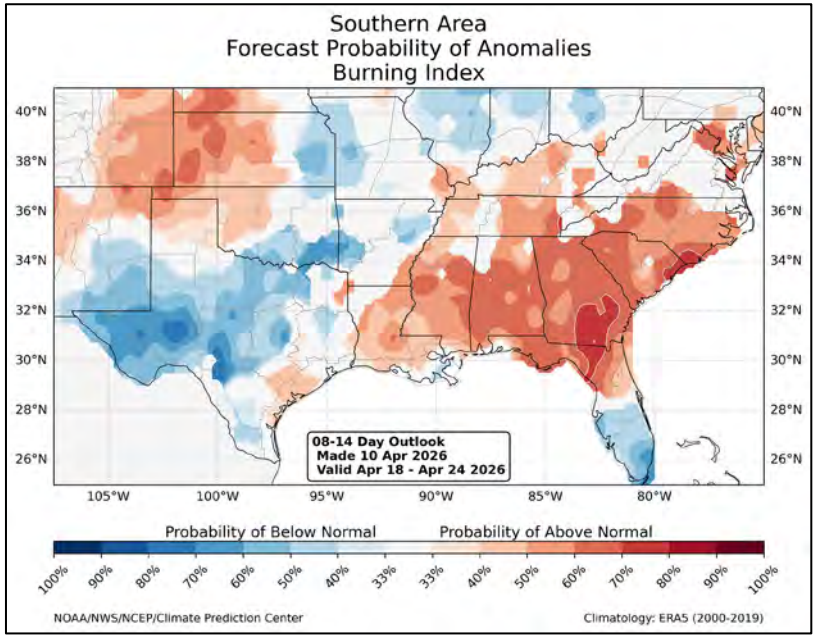




Important to note that there is significant forecast uncertainty as you go further out in time.

Models favoring warmer than normal temps, and lower precipitation. Forecast then applies those weather variables to show potential for near to above normal BI & ERC at week two for much of NC. Remember to apply this in seasonal context.

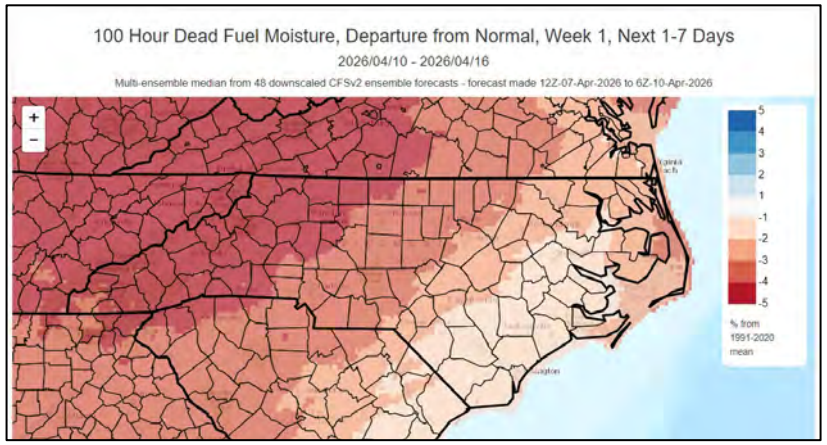




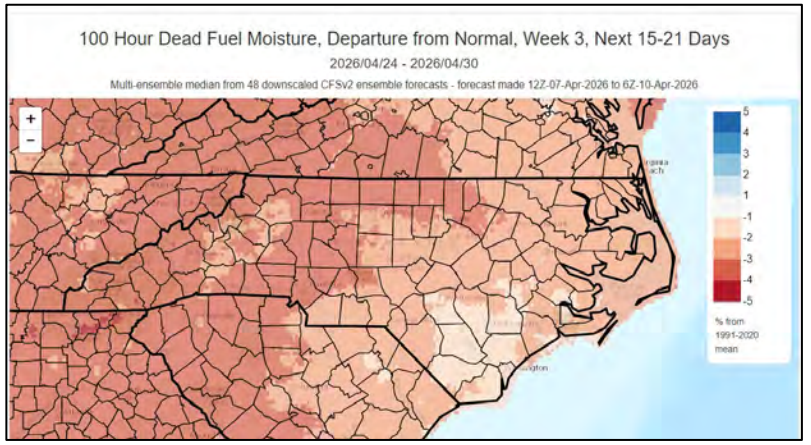
Modeled Departure from Normal by Week: 100-hr Fuels

Output relies on experimental forecast outputs and is subject to change

Week-1

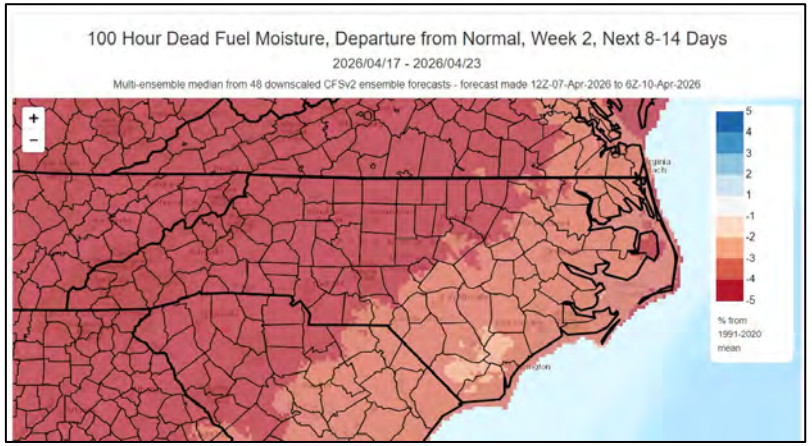


Week-3



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, wind and overnight RH recovery trends.

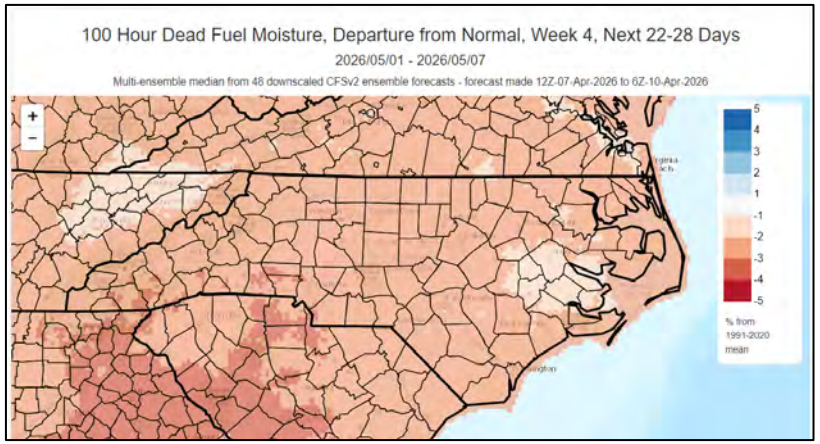
Week-2



Note that <u>modeled</u> impacts of warmer/drier conditions (lower % mc or "worse") are again focused west, most intensely on Weeks1 & 2.

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

Week-4



From: https://climatetoolbox.org/tool/Climate-Mapper

Significant Wildland Fire Potential Outlook: *Updated 4/1/26*

April

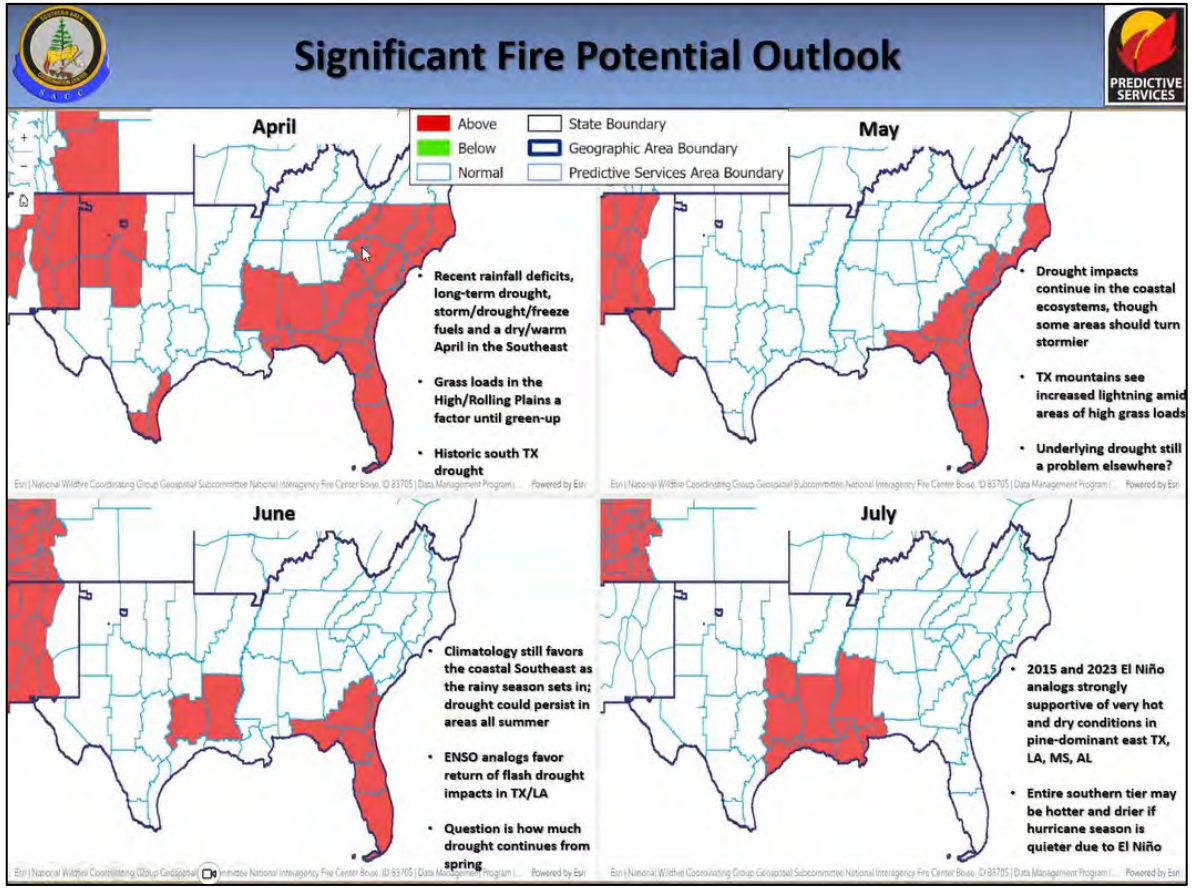
May

June

July

https://www.nifc.gov/nicc-files/predictive/outlooks/monthly_seasonal_outlook.pdf

From SA Fire Environment Briefing 4/3/26



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

FEMS & NFDRS Notes:

- Mesonet Stations lost on 10/1/25, added back to FEMS on 1/29/26 (no prior period of record), added back to our SIGS on 3/12/26 after models better aligned.
- **Live Fuel Moisture Model remains at national catalog settings** – does not match local conditions as we move into greenup. FM-Z and FM-Y include only dead fuels.
- Data & modeling updates will occur soon – will redownload/process FF+ data when FEMS data is corrected.
- Will apply regional GSI settings (if available) to help temper Adj & Hazard Ratings in Growing Season
- Period of Record (Fires + Weather) now: **2010-2024**
- Period of Record for new analysis: **2011-2025**
- FDOP edits to be completed when we get the new data, process it and coordinate with cooperators.
- FM-Z has behaved reasonably well during the dormant season (Fall/Winter/Spring) so far.

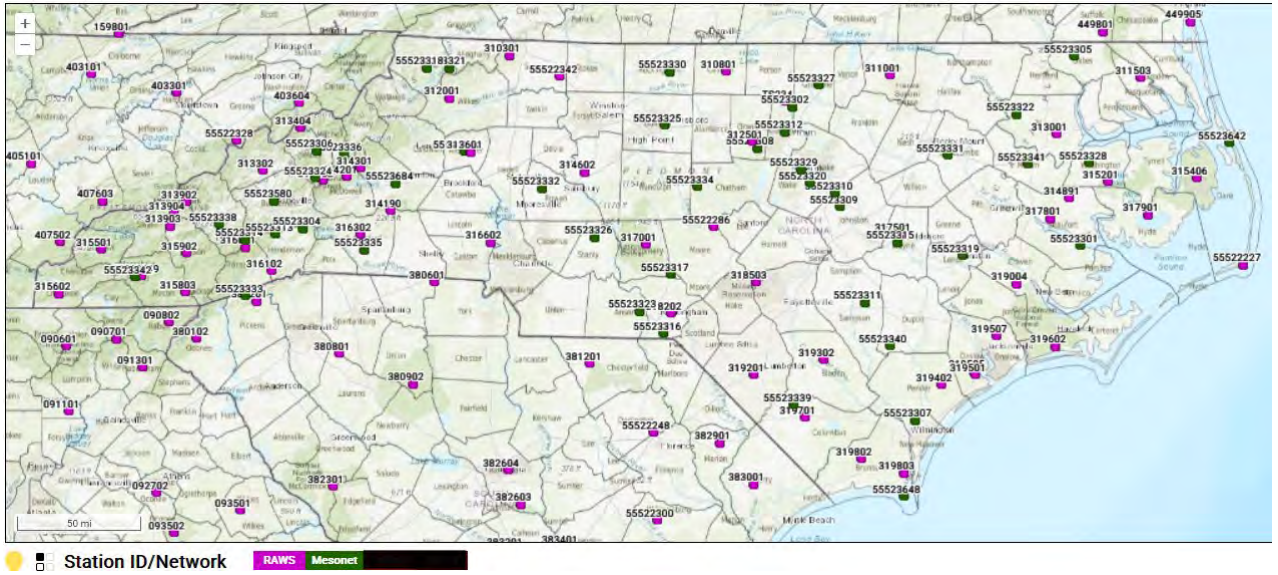
Fuel Model Z does not include live fuels

Fuel Load by Fuel Model

NFDRS Fuel Model	Fuel Loading (tons ac^{-1})						
	1-hr	10-hr	100-hr	1000-hr	Herbaceous	Woody	Drought
V	0.1	0	0	0	1	0	0
W	0.5	0.5	0	0	0.6	1	1
X	4.5	2.45	0	0	1.55	7	2.5
Y	2.5	2.2	3.6	10.16	0	0	5
Z	4.5	4.25	4	4	0	0	7

Note 1: *Drought fuel load is currently turned off in FEMS and is not added to the calculations.*

Note 2: *Herbaceous fuel transfers between live and dead herbaceous fuel classes. Dead herbaceous fuel takes on the fuel moisture of the 1-h fuel.*



FDRA	Special Interest Group Stations (SIG Stations)	Missing SIG Stations
Northern Coastal Plain	Dare Bomb Range, Elizabeth City, Fairfield, Greens Cross, Pocosin Lakes NWR	0
Southern Coastal Plain	Beaufort, CL1 Sandy Run, New Bern, Turnbull Creek, Hofmann, Whiteville, Sunny Point, Finch's Station	0
Eastern Piedmont	Central Crops RS**, Lake Wheeler**, Oxford Tob RS**, Upper Coastal RS**, Warrenton	0
Sand Hills	Fort Bragg, Horseshoe House, Rockingham, Sandhills RS**	0
Western Piedmont	Caswell Game Land, Duke Forest, Lexington, Mt Island Lake	0
Blue Ridge Escarpment	North Cove Pinnacle, Raven Knob, Redezvous Mtn, Rutherford Co Hq, Taylorsville (Lenior)	0
Central Mountains	Davidson River, Guion Farms, Mtn Hort RS**, Seven Mile Ridge	0
Northern Highlands	Busick, Jessen Station, Upper Mtn RS**	0
Southern Highlands	Highlands, Jackson County, Locust Gap, Tusquitee	0

Analysis Settings				Matrix Combinations	
FDRA	Time Range	Daily Extremes	FM	Staffing/Hazard Level	Adjective Rating
Northern Coastal Plain	2010-2024	Y	Z	ERC/BI	ERC
Southern Coastal Plain	2010-2024	Y	Z	ERC/BI	ERC
Eastern Piedmont	2010-2024	Y	Z	ERC/BI	ERC
Sand Hills	2010-2024	Y	Z	ERC/BI	ERC
Western Piedmont	2010-2024	Y	Z	ERC/BI	ERC
Blue Ridge Escarpment	2010-2024	Y	Z	ERC/IC	ERC
Central Mountains	2010-2024	Y	Z	ERC/IC	ERC
Northern Highlands	2010-2024	Y	Z	ERC/BI	ERC
Southern Highlands	2010-2024	Y	Z	ERC/IC	ERC

Reminder of why the Adjective Rating and Hazard Level outputs are not reflecting Spring Green-Up's expected impact on fire danger?

Spring green-up is not being fully reflected in current fire danger outputs due to limitations within the NFDRS V4 fuel model being used (FM-Z). The selected fuel model (FM-Z), while statistically strong and effective during the dormant & shoulder seasons, does not incorporate live fuel moisture. At the same time, the nationally standardized Growing Season Index (GSI) settings introduced with FEMS in October 2025 are interim and not yet regionally calibrated, limiting their ability to accurately represent local green-up progression. Future plans include using properly calibrated GSI applied in a matrix to moderate conditions during the growing season, this has not been completed due to various delays in national program rollout processes.

As a result, fire danger outputs are being driven by dead fuel conditions modeled within FM-Z. With above-normal temperatures, limited wetting rainfall, and poor overall recovery, all size classes of dead fuels are drying, causing Energy Release Component (ERC – think "how hot") values to rise. As we attain complete canopy closure and shading, particularly in hardwood forest areas, dead fuel moisture models will likely overstate overall fire danger—where shading, reduced wind/heating, and higher in-canopy relative humidities would otherwise moderate conditions.

Adjective Rating (ERC) and **Hazard Level** (derived from ERC in combination with Burning Index (BI – think "how difficult") or Ignition Component (IC – think "how receptive"), are therefore reflecting critically dry dead fuel conditions without potential partial muting effects of "green".

At present, leaf-out and increasing live fuel moisture may reduce fire potential in some areas, but recent fire activity over the past week demonstrates that a combination of dry dead fuels, incomplete green-up, and species-specific volatility can still support rapid fire spread and enhanced difficulty of control.

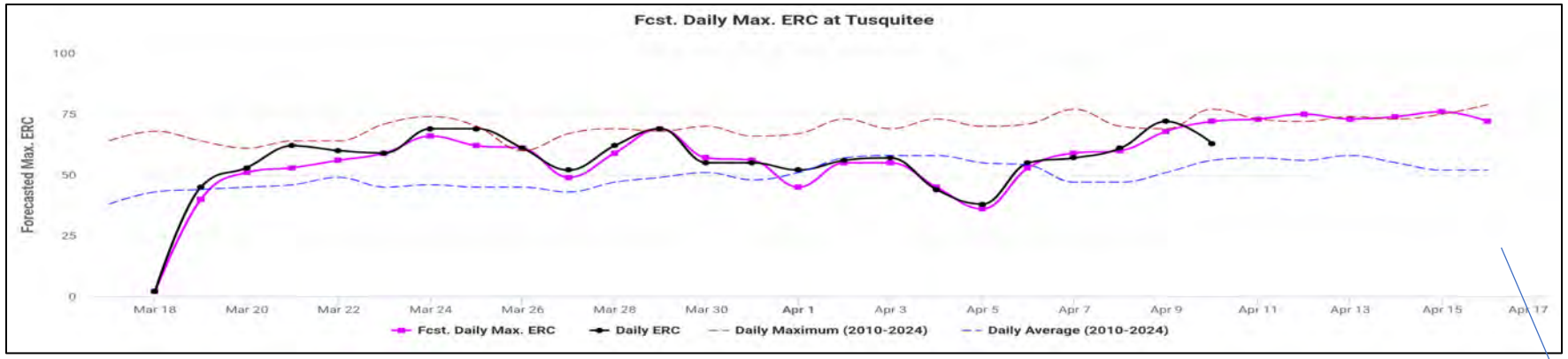
Fire Weather Intelligence Portal – Current Links & Notes

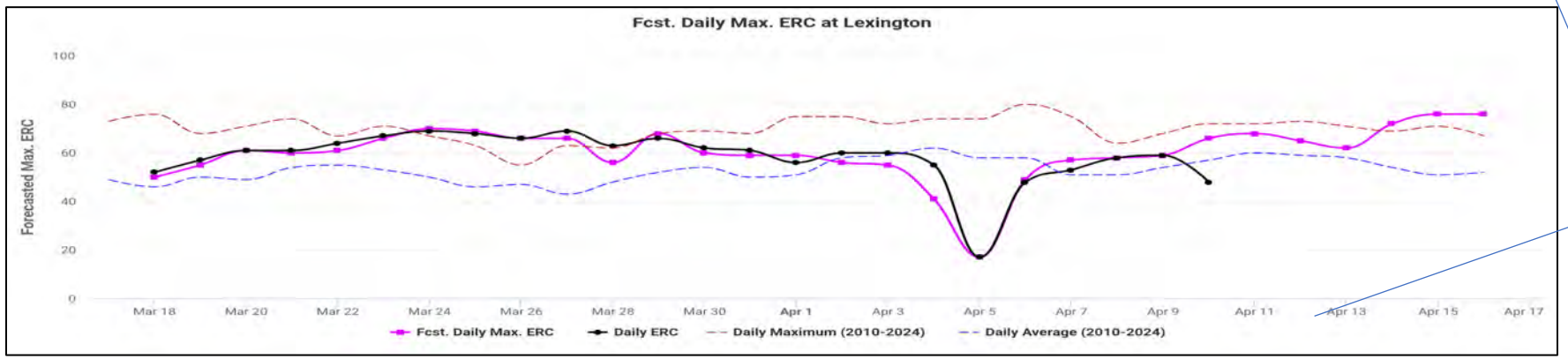
The interim breakpoints and percentiles based on FEMS implementation have been applied to the FWIP for North Carolina FDRAs. Content continues to be added and tools updated. Updated versions of the Hazard Assessment Tool, Adjective Fire Danger Rating Tool, and Daily Forecast/Observed Indices by Station have been implemented effective 3/12/26. The new versions automatically replaced the older versions. Additional features will be added (data analysis).

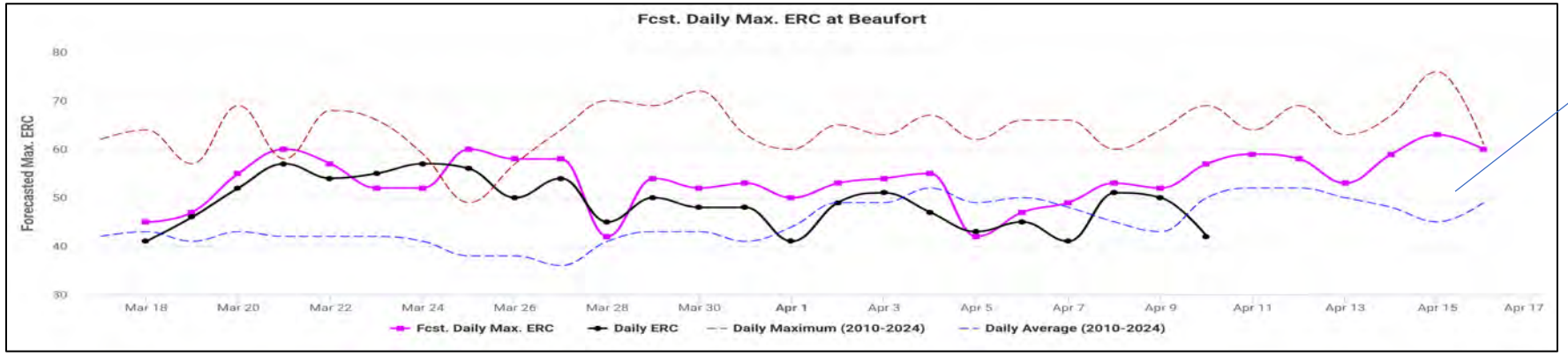
- Public Facing Fire Danger Page & Fire Danger Digest Table
  (NC ratings based on ERC-Z analysis)
- Station Viewer Portal
  (Past, Current, Forecast Conditions Tab)
  *HOURLY Station Fire Danger Observations have been added on the PAST and CURRENT Conditions Tabs, as of 3/6/26
- Hazard Assessment Tool
  (based on ERC-Z/BI-Z or ERC-Z/IC-Z depending on FDRA)
- FEMS Forecast NFDRS Indices by Station
- FEMS Observed NFDRS Indices by Station
- Quality Control Viewer Tool
- Summary Site – Supplemental Tools

The Weekly Outlook Tool is still offline – being revised to conform to new analysis/FEMS integration.

FWIP – Station Tracking/Seasonal Trend Examples (Observed and Forecasts with Max & Min for period of record)

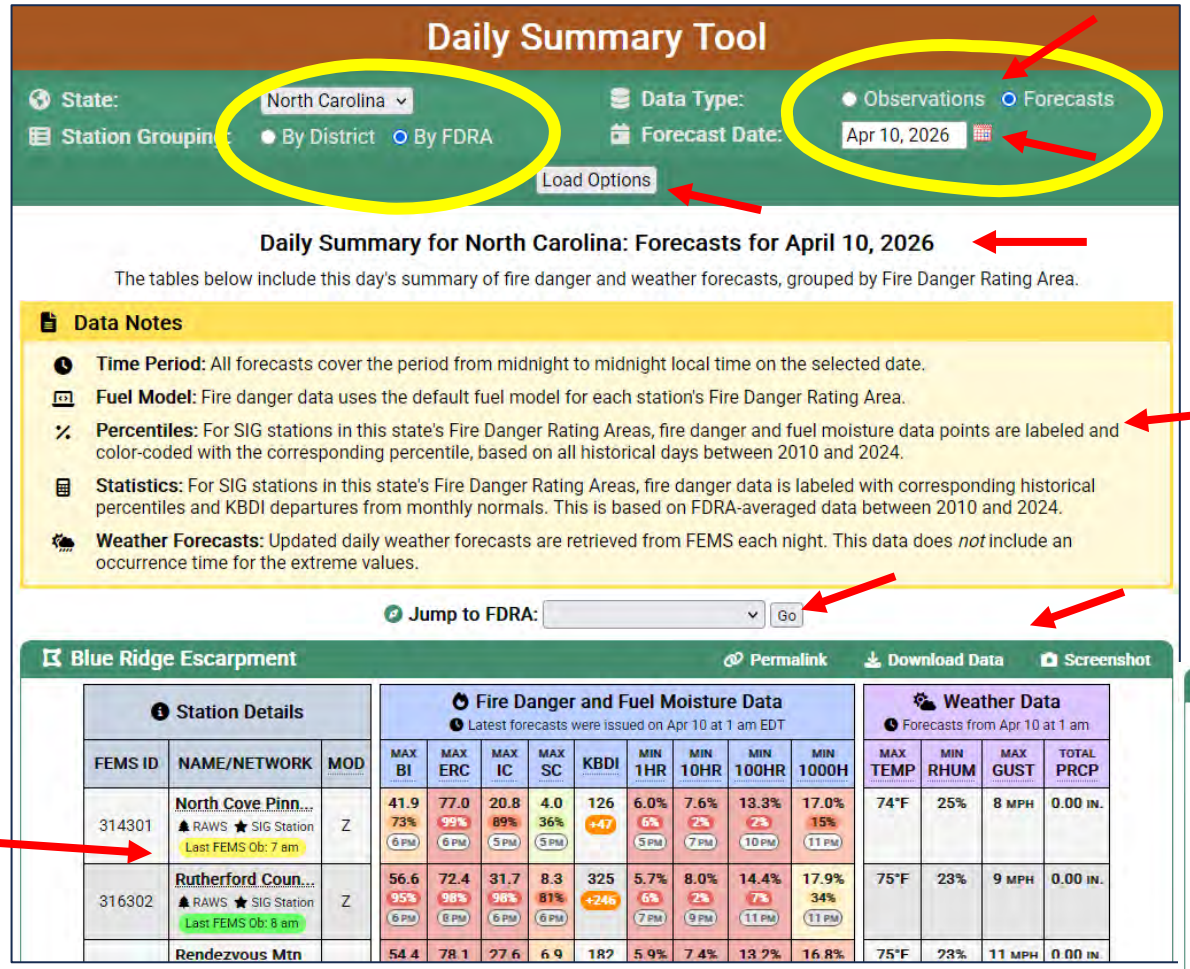




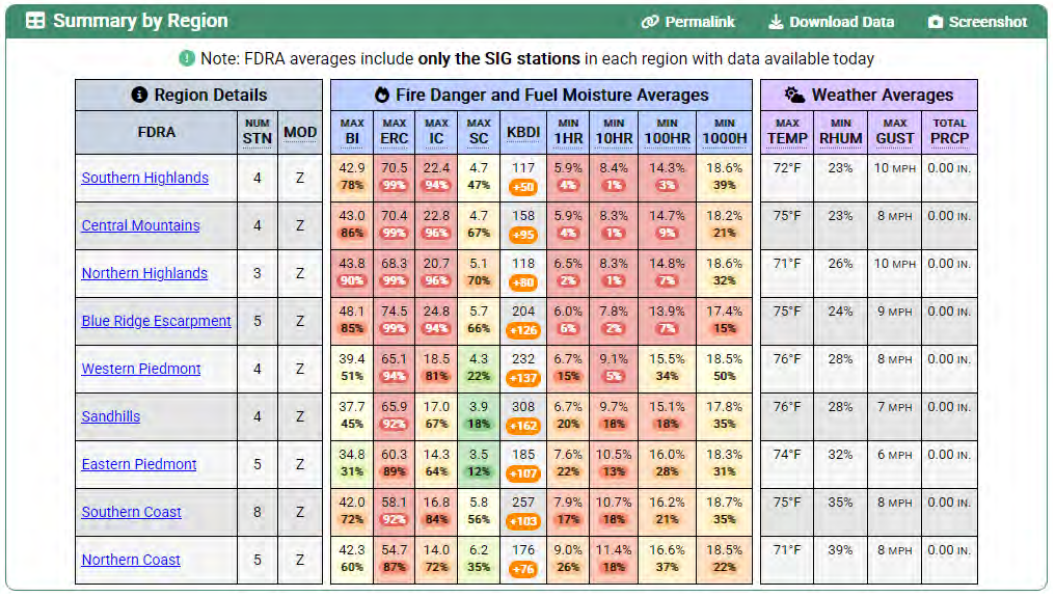


**FWIP database will be updated to reflect changes in FEMS processed weather and NFDRS outputs as we are made aware of changes related to station specific period of record.*

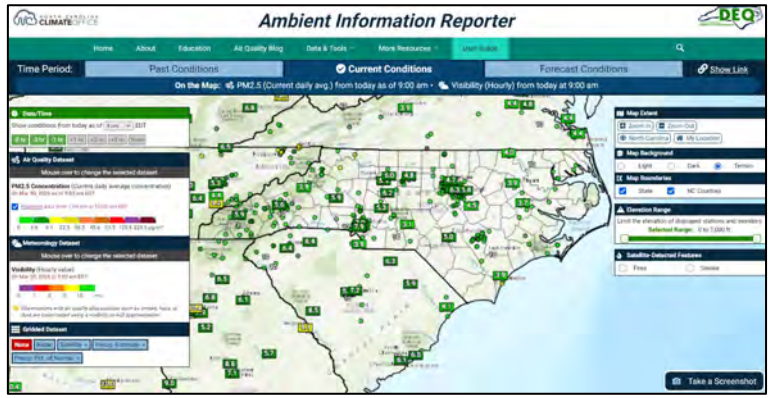
Examples of Changes to FWIP – Daily Summary Tool (Observed and Forecasts)



- **Summary at Bottom of Page (either by FDRA or by District)**
- **Make sure to read descriptions at top of page, as there are slight differences between forecast, observed, etc.**
- **This example is forecast for Friday 4/10/26**



Other Resources:



- https://airquality.climate.ncsu.edu/air/
- https://fire.airnow.gov/

Fuels and Fire Management Considerations for Hurricane Helene Damaged Areas

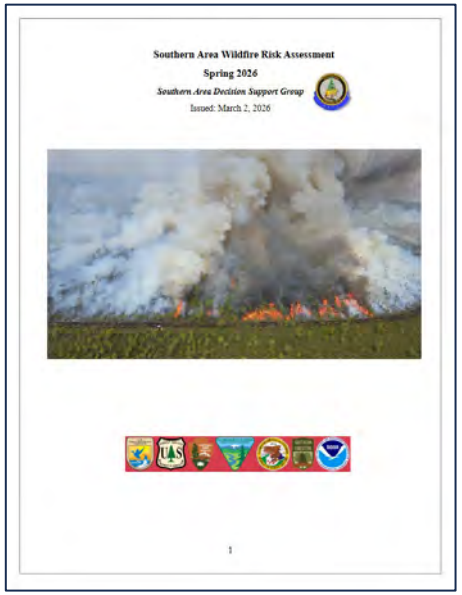
Executive Summary

Hurricane Helene has caused significant disruption to forested landscapes, resulting in widespread debris accumulation and altered fuel structure across the southeast particularly in the Southern Appalachians of southwest Virginia, western North Carolina, northeast Tennessee, northeast Georgia as well as the Piedmont of South Carolina, central Georgia and north Florida. The storm's high winds broke or toppled trees, and created extensive blowdown zones, transitioning fuel conditions from lighter models, such as grass and leaf litter, to heavy slash and debris typical of Fuel Models 12, 13, SB2, and SB3. This shift in fuel types presents substantial challenges for wildfire suppression efforts. The increased resistance to control, difficult access, and elevated potential for extreme fire behavior necessitates strategic adaptation of suppression tactics. The storm's aftermath has also introduced the need to reconcile older fire line production rates with the Scott and Burgan 40 fuel models used for modern fire behavior predictions, as the line production data for these newer models remains undeveloped. This report explores these challenges, provides practical insights for resource deployment, and outlines strategies for managing this complex landscape. The effects of Helene will be felt for some time. In a 2005 risk assessment for Hurricane Katrina, it was reported by the Mississippi Forestry Commission that debris from Hurricane Camille which struck in 1969 was still preventing access to certain areas.

This document provides fuel loading and modeling guidance, fire behavior expectations, and fire management considerations for both wildfire response and prescribed fire implementation for each of the hurricane damage severity categories described below:

Damage Severity	% of overstory altered/damaged
Catastrophic	>50%
Severe	34-50%
Moderate	16-33%
Light	~25%

"Fuels and Fire Management Considerations for Hurricane Damaged Areas"



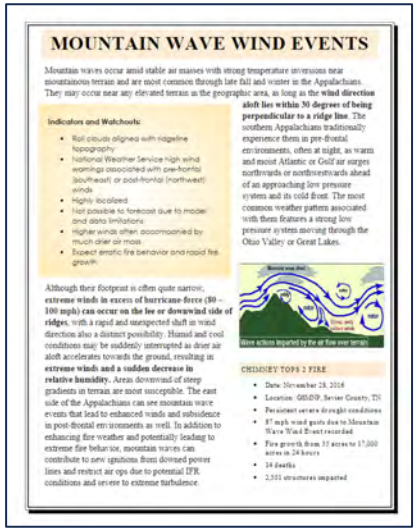
Southern Area Wildfire Risk Assessment

Spring 2026

Southern Area Decision Support Group

Issued: March 2, 2026

https://gacc.nifc.gov/sacc/resources/predictive/SASpringRiskAssessment_2026_final.pdf



MOUNTAIN WAVE WIND EVENTS

Mountain waves occur amid stable air masses with strong temperature inversions near mountainous terrain and are most common through late fall and winter in the Appalachians. They may occur near any elevated terrain in the geographic area, as long as the **wind direction aloft lies within 30 degrees of being perpendicular to a ridge line**. The southern Appalachians traditionally experience them in pre-frontal environments, often at night, as warm and moist Atlantic or Gulf air surges northwards or northwestwards ahead of an approaching low pressure system and its cold front. The most common weather pattern associated with them features a strong low pressure system moving through the Ohio Valley or Great Lakes.

Indicators and Watchouts:

- Roll clouds aligned with ridgeline topography
- National Weather Service high wind warnings associated with pre-frontal (southwest) or post-frontal (northwest) winds
- Highly localized
- Not possible to forecast due to model and data limitations
- Higher winds often accompanied by much drier air mass
- Expect erratic fire behavior and rapid fire growth

Although their footprint is often quite narrow, **extreme winds in excess of hurricane-force (80 – 100 mph) can occur on the lee or downwind side of ridges**, with a rapid and unexpected shift in wind direction also a distinct possibility. Humid and cool conditions may be suddenly interrupted as drier air aloft accelerates towards the ground, resulting in **extreme winds and a sudden decrease in relative humidity.** Areas downwind of steep gradients in terrain are most susceptible. The east side of the Appalachians can see mountain wave events that lead to enhanced winds and subsidence in post-frontal environments as well. In addition to enhancing fire weather and potentially leading to extreme fire behavior, mountain waves can contribute to new ignitions from downed power lines and restrict air ops due to potential IFR conditions and severe to extreme turbulence.

CHIMNEY TOPS 2 FIRE

- Date: November 28, 2016
- Location: GSMNP, Sevier County, TN
- Persistent severe drought conditions
- 87 mph wind gusts due to Mountain Wave Event recorded
- Fire growth from 35 acres to 17,000 acres in 24 hours
- 14 deaths
- 2,591 structures impacted

https://gacc.nifc.gov/sacc/predictive/outlooks/MountainWavesFactSheet.pdf

SOUTHERN Fire Exchange

Superfog: State of the Science

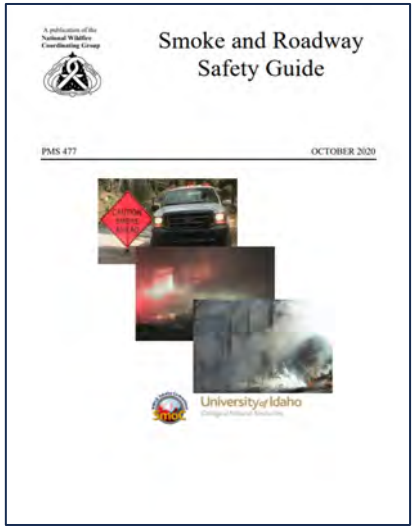
Alan Long, Joshua Weiss, Marko Princevac, and Christian Bartolome

INTRODUCTION

WHAT CAUSES SUPERFOG?

SMOKE DISPERSION MATRIX

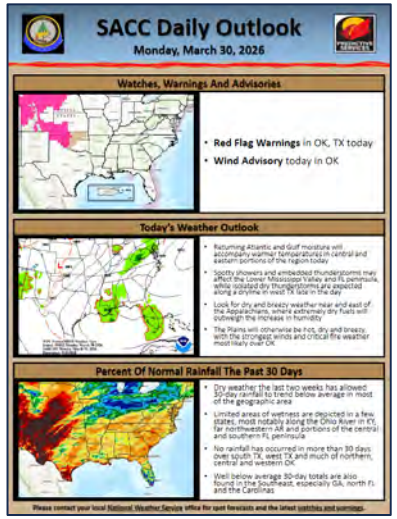
- Southern Fire Exchange Superfog Publication
- NWCG - Smoke and Roadway Safety Pocket Card
- NWCG – Smoke and Roadway Safety Guide



Smoke and Roadway Safety Guide

PMS 477 OCTOBER 2020

University of Idaho



SACC Daily Outlook

Monday, March 30, 2026

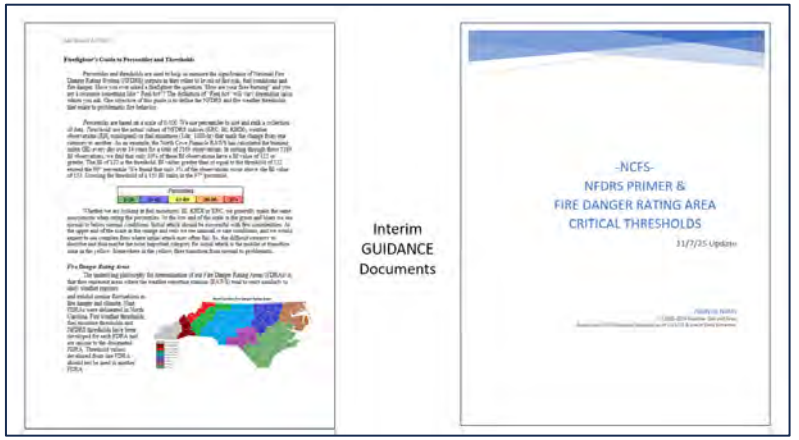
Watches, Warnings And Advisories

- **Red Flag Warnings** in OK, TX today
- **Wind Advisory** today in OK

Today's Weather Outlook

Percent Of Normal Rainfall The Past 30 Days

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



Interim GUIDANCE Documents

-NCFS-

NFDRS PRIMER & FIRE DANGER RATING AREA CRITICAL THRESHOLDS

11/7/25 Update

SACC Daily Outlook, Selected Snips from Friday, 4/10/26

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

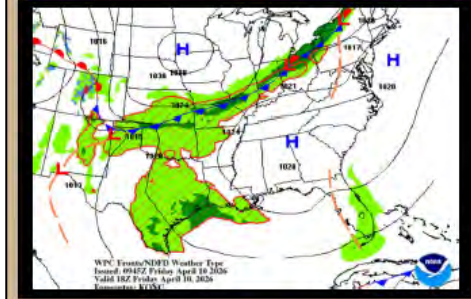
SACC Daily Outlook

Friday, April 10, 2026

Watches, Warnings and Advisories

- **Frost Advisory** this morning in northwest VA

Today's Weather Outlook



- High pressure will maintain an unusually dry air mass over the Southeast today, while breezy conditions continue for much of the coastal Southeast
- Fire danger will be highest where sea breezes in the Southeast bring a gusty wind shift, with breezy, dry and warmer weather the culprit in the Appalachians and adjacent areas
- Look for showers and thunderstorms to increase in coverage over the Plains into portions of northern AR, with severe storms possible from the panhandles through northern OK and AR
- A few showers will still be possible over the FL peninsula, but rainfall amounts will be much lower than the last few days
- Above normal temperatures will return to most of the geographic area this afternoon, except for the FL peninsula and areas in the Plains that see clouds and wet weather

Historic Fire Danger Indices Expand Into Next Week

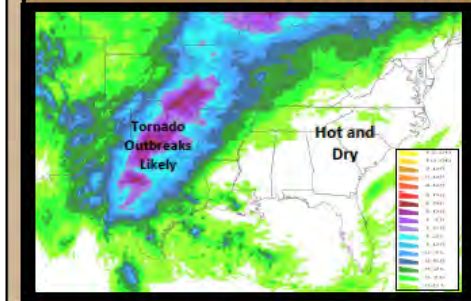
- Forecasted ERC-Y percentiles today are depicted
- Areas that are fully greened up may be misrepresented since fuel model Y does not account for live fuel moisture
- Nonetheless, a highly unusual weather pattern taking shape, with persistent dry air and increasing temperatures into next week will result in widespread historic fire danger indices across the Southeast
- Already today, portions of the Appalachian states will see ERC-Y values near the historical max for this time of year (deep red dots), with these conditions returning to much of the Piedmont and coastal plain from the Lower Mississippi Valley to the East Coast next week
- Heavy dead fuels that are cured will likely become highly receptive to fire in the building heat wave, with 100- and 1000-hour dead fuel moisture dropping to historic lows, mostly below the 3rd percentile
- After a brief reprieve in the High Plains the next few days, fire danger will increase again for most of next week, especially where soaking rain does not occur today into tomorrow

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

SACC Daily Outlook

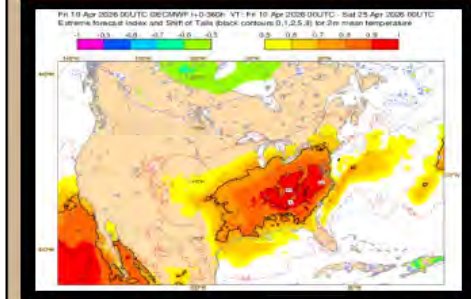
Friday, April 10, 2026

Forecast Precipitation the Next Week



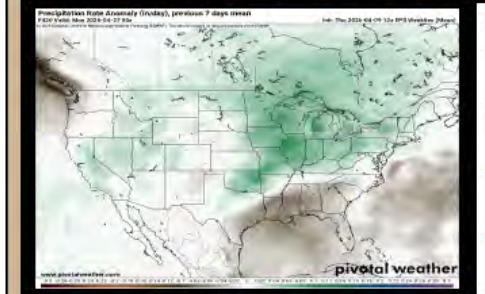
- Near-daily outbreaks of severe thunderstorms will bring as much as 2-4" of rain to portions of TX, OK and western AR through the next week
- Local 4-8" amounts are possible where thunderstorms are most consistent – drought relief will occur but flooding risks may increase, as well
- The High Plains are forecast to see hit and miss heavy rainfall amounts into Saturday, and some areas could see 1-3" while nearby locations see minimal moisture
- Other than a few showers over the FL peninsula today and isolated storms in the Appalachian states tomorrow and late next week, the majority of the Lower Mississippi Valley into the Southeast will be dry for the foreseeable future

Mid-Summer Like Heat Expands South Into Late April



- The beginning of a heat wave in the Southeast this weekend and early next week is likely just a taste of unusually hot weather that will intensify and expand during mid- to late April
- The ECWMF extreme forecast index forecasts persistent anomalous heat across the region into late April, with record heat most likely in the Appalachian states next week, shifting towards the coastal plain and FL peninsula the following week
- Well above average temperatures will also be likely in most of the Plains and Mississippi Valley, while cooler intrusions of air associated with wet weather could affect the Plains at times; hotter weather is more likely to return to the TX coastal plain during week two
- These conditions may result in historically early 90- and 100-degree weather in the Southeast and will rapidly worsen drought impacts given persistent dry air and what looks like a continued dry spell

Likely Dry The Rest Of April For The Coastal Southeast



- Rainfall anomalies for the week of April 19-26 are depicted
- Well below average rainfall is forecasted for the Gulf coastal plain, Lower Mississippi Valley and most of the Southeast, with a gradient possible over the Appalachians
- Wet conditions and severe thunderstorm outbreaks appear most likely in OK, north TX and AR but could impact KY, VA and adjacent portions of the Appalachians, as well, especially late in the period
- The High Plains are also forecast to be drier than average – if wetting rain does not occur this weekend, dormant fuels will continue to support significant fire risks in a likely dry and windy pattern
- There are no obvious signs of a return to wetter weather in the coastal Southeast into early May, likely resulting in widespread extreme to exceptional drought and high-end fire danger

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

SACC Daily Outlook, Selected Snips from Friday, 4/10/26

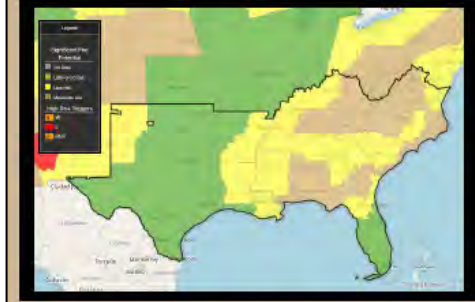
https://gacc.nifc.gov/sacc/resources/predictive/sacc-daily-outlook.pdf

SACC Daily Outlook

Friday, April 10, 2026

PREDICTIVE SERVICES

Significant Fire Potential Outlook Today

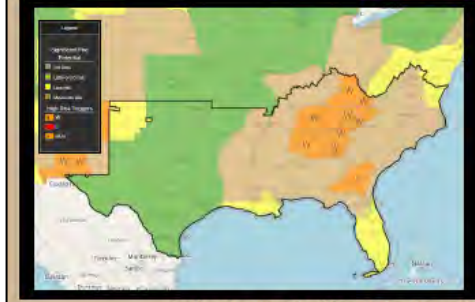


- The Appalachian states will see warmer conditions today, along with dry and breezy conditions, bringing extremely high fire danger; RH will be as low as 15-30%, locally below 10% in the mountains, and S/SW winds will occasionally gust as high as 15-25 mph this afternoon; stronger winds are possible in northern KY and VA
- Fuels will continue to dry in areas of the coastal Southeast experiencing significant drought; light winds and RH as low as 20-35% will be followed by sea breeze wind gusts as high as 15-25 mph
- The rest of the Mississippi Valley and Southeast with low significant fire potential (SFP) will see a very dry and warmer day, with light winds
- Lightning ignitions or emerging holdovers are possible in the High Plains, but the fire environment will otherwise improve due to more humid weather and increasing chances of wetting rain

Significant Fire Potential Outlook Saturday

- A weak cold front will stall over the Appalachians Saturday, with very dry and warm conditions continuing; isolated thunderstorms capable of producing lightning ignitions and erratic outflow wind gusts over 30 mph are possible, but their coverage and placement is uncertain
- Conditions otherwise in the Appalachians and Southeast will feature RH as low as 15-30%, highs in the 80s and the potential for increased fire behavior due to higher mixing heights; sea breezes will again bring gusts up to 25 mph to the coastal plain from MS to NC
- Lightning holdovers could emerge over the FL peninsula tomorrow, with breezy conditions persisting; the Sargent Fire will see RH as low as 25% in the afternoon, with a gusty sea breeze late
- Very dry and warm conditions in the Mississippi Valley will be accompanied by light and variable winds, except near the coast where sea breezes develop
- Any areas that manage to stay dry in the High Plains could still see lightning-induced IA, mainly over the panhandles

Significant Fire Potential Outlook Sunday



- Hot, dry and breezy conditions will result in **HIGH RISK SFP** for the Appalachians, Cumberland Plateau and Tennessee Valley Sunday; look for RH from 15-30%, record high temperatures and S/SW wind gusts from 20-35 mph, locally stronger in TN and KY; the driest fuel conditions so far this year will affect these areas, with historic fire danger indices expected
- Similar weather but thicker clouds are expected in the Mid-Mississippi Valley, and red flag conditions can not be ruled out in far eastern AR, north MS, west TN and western KY
- Extremely dry fuels, RH as low as 20-30%, highs well into the 80s and gusty winds will result in **HIGH RISK SFP** in south GA, potentially affecting nearby areas of adjacent PSAs; overall winds will be breezier, but a sea breeze will bring gusts to near 30 mph late in the day
- All of the rest of the Southeast will be warm, dry and breezy, and fuels will continue to become more receptive over drier parts of the FL peninsula
- A dryline will shift east through the TX and OK panhandles, bringing a warmer, dry and breezy day; any areas that remain dry the next few days could see fire risks return, with RH from 10-20% and SW gusts up to 40 mph expected

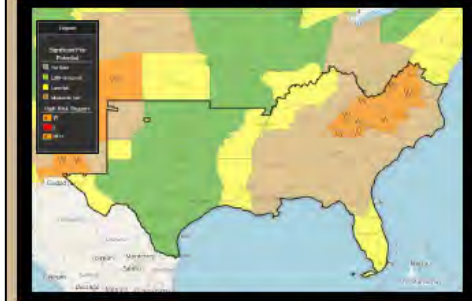
National 7-Day Significant Fire Potential Outlook High Risk Trigger Definitions

SACC Daily Outlook

Friday, April 10, 2026

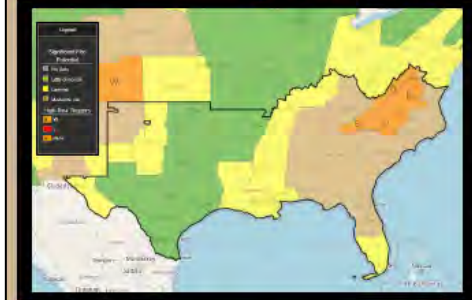
PREDICTIVE SERVICES

Significant Fire Potential Outlook Monday



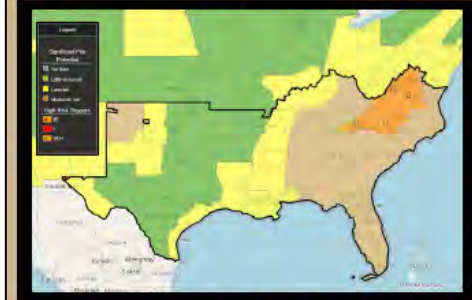
- **HIGH RISK SFP** will persist as fuels trend even drier across the Appalachians and portions of the Piedmont; record highs from the 70s in the mountains to near 90 in the Piedmont will be accompanied by RH as low as 15-30% and SW winds gusting from 25-40 mph; additional PSAs may be included as confidence increases
- No major changes are in store for the rest of the Southeast other than even drier fuels than preceding days; sea breeze wind gusts of 15-30 mph could result in significant impacts to any ongoing or new incidents, with locally stronger winds expected over the FL peninsula
- Spotty showers and thunderstorms could affect the Mississippi Valley, but confidence is low; given the dryness of fuels, some lightning ignitions can not be ruled out
- At least moderate SFP is likely over the High Plains Monday in a critical fire weather pattern; look for RH as low as 8-15%, highs in the 80s to near 90 and SW wind gusts of 30-50 mph; **HIGH RISK** upgrades will be issued if widespread rain does not occur

Significant Fire Potential Outlook Tuesday



- Though winds will not be as strong as Sunday and Monday, **HIGH RISK SFP** is likely again Tuesday in portions of western NC and VA; record highs in the 80s to low 90s, RH as low as 15-30% and SW wind gusts of 15-30 mph are in store, with summer-like fire behavior possible
- All of the rest of the Southeast will continue to see a drying trend in fuels, with hot temperatures, very dry air and breezy conditions continuing; sea breezes will again produce gusts as high as 15-30 mph along the Gulf Coast and East Coast
- The FL peninsula is likely to see an increase in activity and large fire potential as fuels dry out quickly, especially over the western and northern peninsula, including for the Sargent Fire
- Critical to potentially extreme fire weather is likely over the TX and OK panhandles, perhaps extending farther east into OK, but there is too much uncertainty in fuel dryness and the timing/placement of the strongest winds

Significant Fire Potential Outlook Wednesday



- Historic April heat with highs from the 80s in the mountains to the mid-90s in the lower elevations of NC and VA will further dry fuels to extreme levels; RH will again be as low as 20-30%, locally lower in the Piedmont, while SW wind gusts of 15-30 mph will continue
- These conditions may affect the rest of the Appalachians, Piedmont and Tennessee Valley, as well, but green-up could tend to limit risks with overall lighter winds than earlier in the week
- The coastal Southeast will see at least moderate SFP with increasingly dry fuels, very warm to hot temperatures, RH as low as 20-40% and gusty sea breeze winds likely
- Confidence is lower in the details for the Plains, but some critical fire weather is possible, especially if low pressure exiting the Southwest is on the slower side

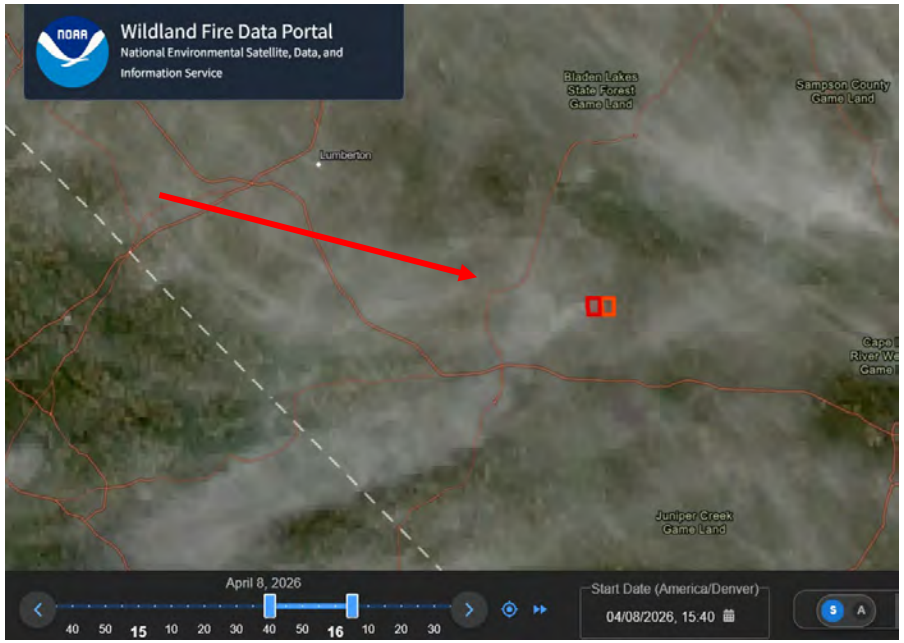
North Carolina State University Fire Weather Intelligence Portal

Recent Fire: Rosindale Road

R1/D8/Bladen & Columbus

Discovery Date: 4/8/26

Size: ~762 acres @ 60% Containment as of 4/9



Notes from field personnel:

Rapid rates of spread, torching, short range spotting, burned through/across normally “wet” drains. Hardwood greenup in the area approaching 80-90%.

Images on left show examples of 100-hr & 1000-hr fuel consumption. Duff & litter burning out around bases of standing timber.

Overall Trends & Notes

- Most areas of the state are 3-4 weeks since a ≥ 0.50” rain event. KBDI values continue to climb due to higher daily max temps & streams gauges are showing below to well below normal flow. CPC forecasts show a continued trend of much warmer temps and favoring of below normal precip for at least the next couple weeks.

- Hardwood Leaf Out & Spring Green-up is advancing (see previous slides) and will impact fire danger & site-specific fire behavior as we move further into Spring 2026. The full benefit of green conditions, once attained, will be modified at the local level by drought and impact to both live and dead fuel availability.

- Due to continued complications with the FEMS rollout, a regionally adjusted GSI doesn’t yet exist to then apply in matrix to temper FM-Z outputs. **FM-Z does not include live fuels, so can’t model positive or negative impacts of live fuel state.** An interim adjustment process will be developed/applied until newer data and GSI calibrations are available.

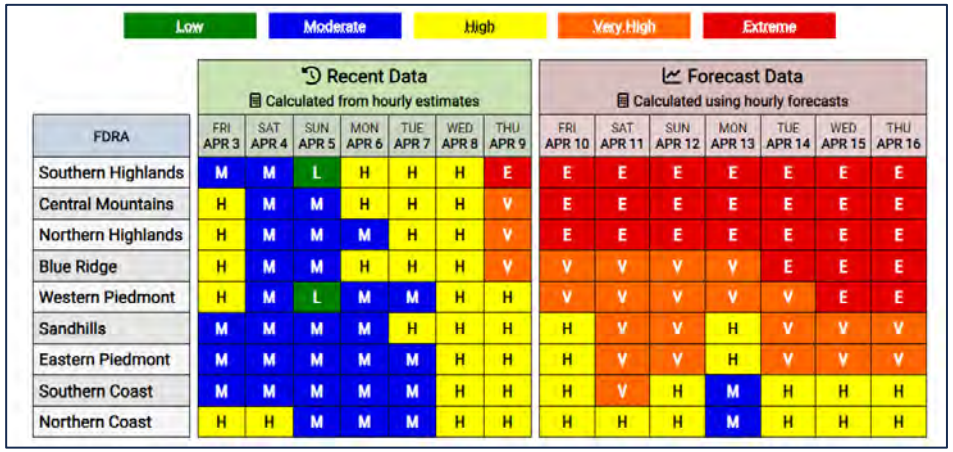
- Dead fuel moisture & FM-Z outputs are telling us, however, on a percentile basis many stations are near records for 100’s and 1000’s fuel dryness. 100-hr & 1000-hr fuels have begun consuming, along with aerial snags where consecutive days of fuel drying and lack of rain have aligned. Duff & organics on drought impacted landscape positions will begin consuming increasingly, as greenup & soil moisture drawdown occurs.

- Typical progression in periods of drought aligning with Spring greenup yield a transition of larger Mountain fires to Piedmont & Coastal Plain as we move into May. Relates to volatility, availability of fuels, and potential ignition sources. Helene impact areas will continue to be an outlier.

- Critically dry dead fuels & low min rh’s have not aligned with a sustained wind trigger recently. Local winds have generally been a major factor, including sea breeze & terrain driven winds. The upcoming week will see more instability, greater mixing potential, wind, and much warmer conditions overlapping with the dry dead fuel conditions.

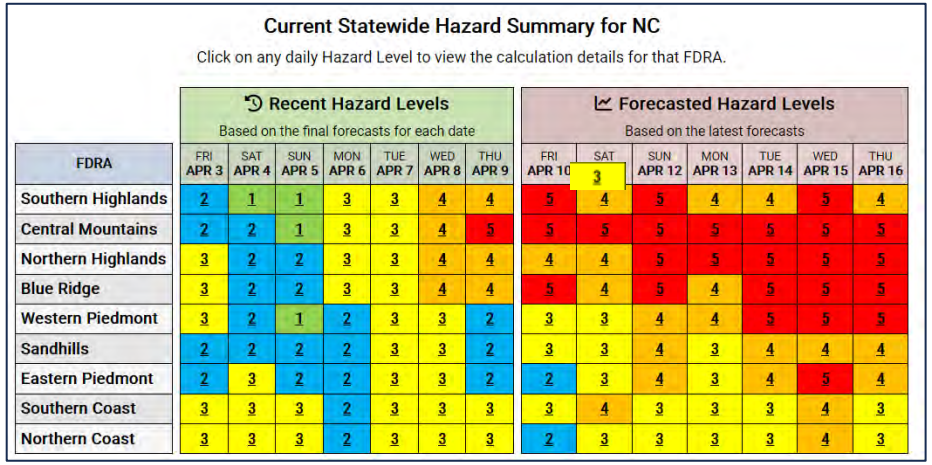
- Reburn risk will remain an issue on any smoldering fire footprints once browning and leaf-drop/needle cast occurs, especially in drought impacted areas.

Daily Adjective Rating Outputs for each FDRA (ERC from FM-Z)
(Observed on Left, Forecast on Right)



FDRA	Recent Data (Calculated from hourly estimates)							Forecast Data (Calculated using hourly forecasts)						
	FRI APR 3	SAT APR 4	SUN APR 5	MON APR 6	TUE APR 7	WED APR 8	THU APR 9	FRI APR 10	SAT APR 11	SUN APR 12	MON APR 13	TUE APR 14	WED APR 15	THU APR 16
Southern Highlands	M	M	L	H	H	H	E	E	E	E	E	E	E	E
Central Mountains	H	M	M	H	H	H	V	E	E	E	E	E	E	E
Northern Highlands	H	M	M	M	H	H	V	E	E	E	E	E	E	E
Blue Ridge	H	M	M	H	H	H	V	V	V	V	V	E	E	E
Western Piedmont	H	M	L	M	M	H	H	V	V	V	V	V	E	E
Sandhills	M	M	M	M	H	H	H	H	V	V	H	V	V	V
Eastern Piedmont	M	M	M	M	M	H	H	H	V	V	H	V	V	V
Southern Coast	M	M	M	M	M	H	H	H	V	H	M	H	H	H
Northern Coast	H	H	M	M	M	H	H	H	H	H	M	H	H	H

Hazard Matrix Outputs for each FDRA (FM-Z)



FDRA	Recent Hazard Levels (Based on the final forecasts for each date)							Forecasted Hazard Levels (Based on the latest forecasts)						
	FRI APR 3	SAT APR 4	SUN APR 5	MON APR 6	TUE APR 7	WED APR 8	THU APR 9	FRI APR 10	SAT APR 11	SUN APR 12	MON APR 13	TUE APR 14	WED APR 15	THU APR 16
Southern Highlands	2	1	1	3	3	4	4	5	4	5	4	4	5	4
Central Mountains	2	2	1	3	3	4	5	5	5	5	5	5	5	5
Northern Highlands	3	2	2	3	3	4	4	4	4	5	5	5	5	5
Blue Ridge	3	2	2	3	3	4	4	5	4	5	4	5	5	5
Western Piedmont	3	2	1	2	3	3	2	3	3	4	4	5	5	5
Sandhills	2	2	2	2	3	3	2	3	3	4	3	4	4	4
Eastern Piedmont	2	3	2	2	3	3	2	2	3	4	3	4	5	4
Southern Coast	3	3	3	2	3	3	3	3	4	3	3	3	4	3
Northern Coast	3	3	3	2	3	3	3	2	3	3	3	3	4	3

*Changes in actual precipitation amounts, min/max rh’s and other weather variables have significant impact on the model as you go further out in forecast period.