

Meteorology Update 12/23/22 08:15

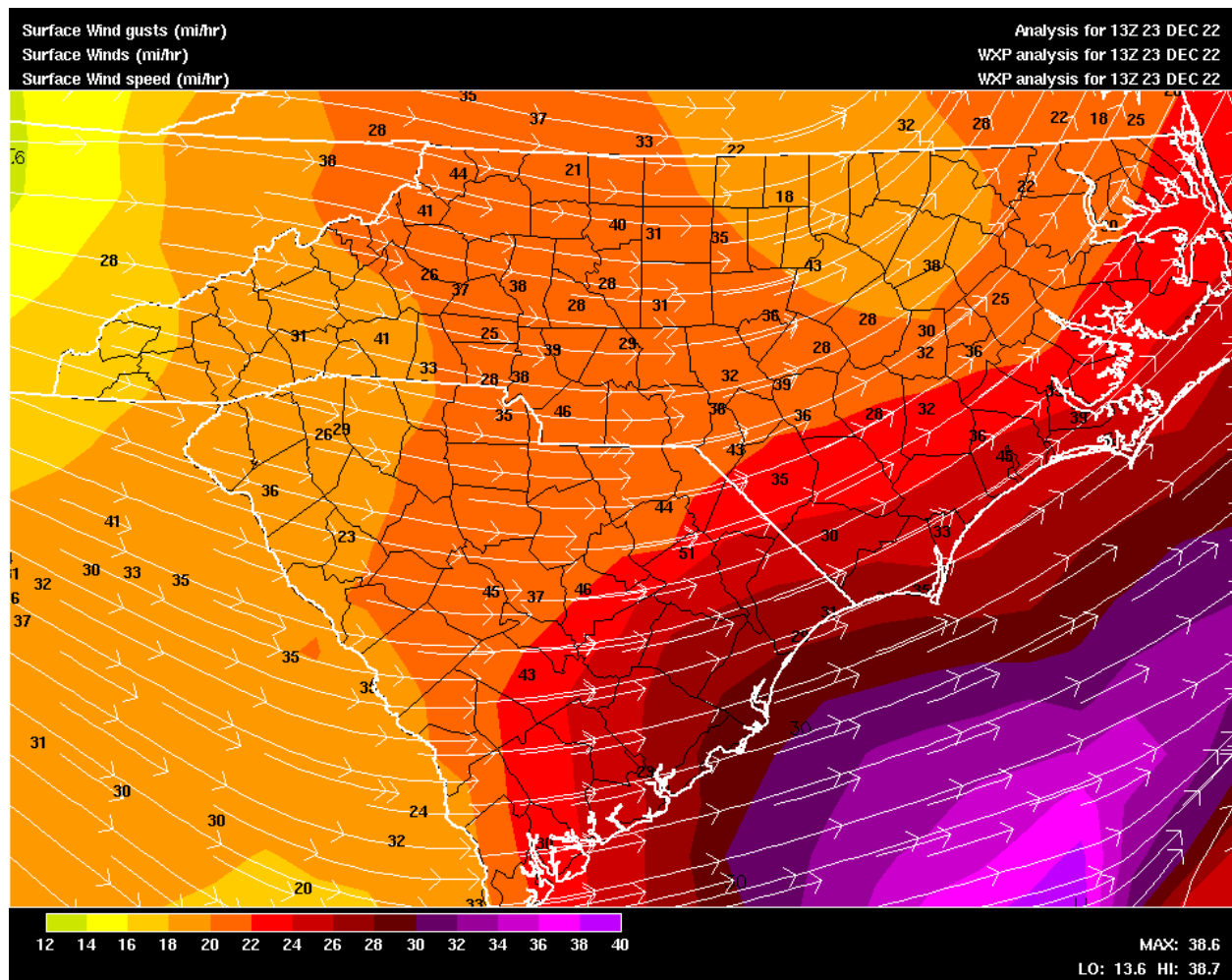
Below is a graphic showing the 8am surface sustained winds (colors) and wind gusts (text).

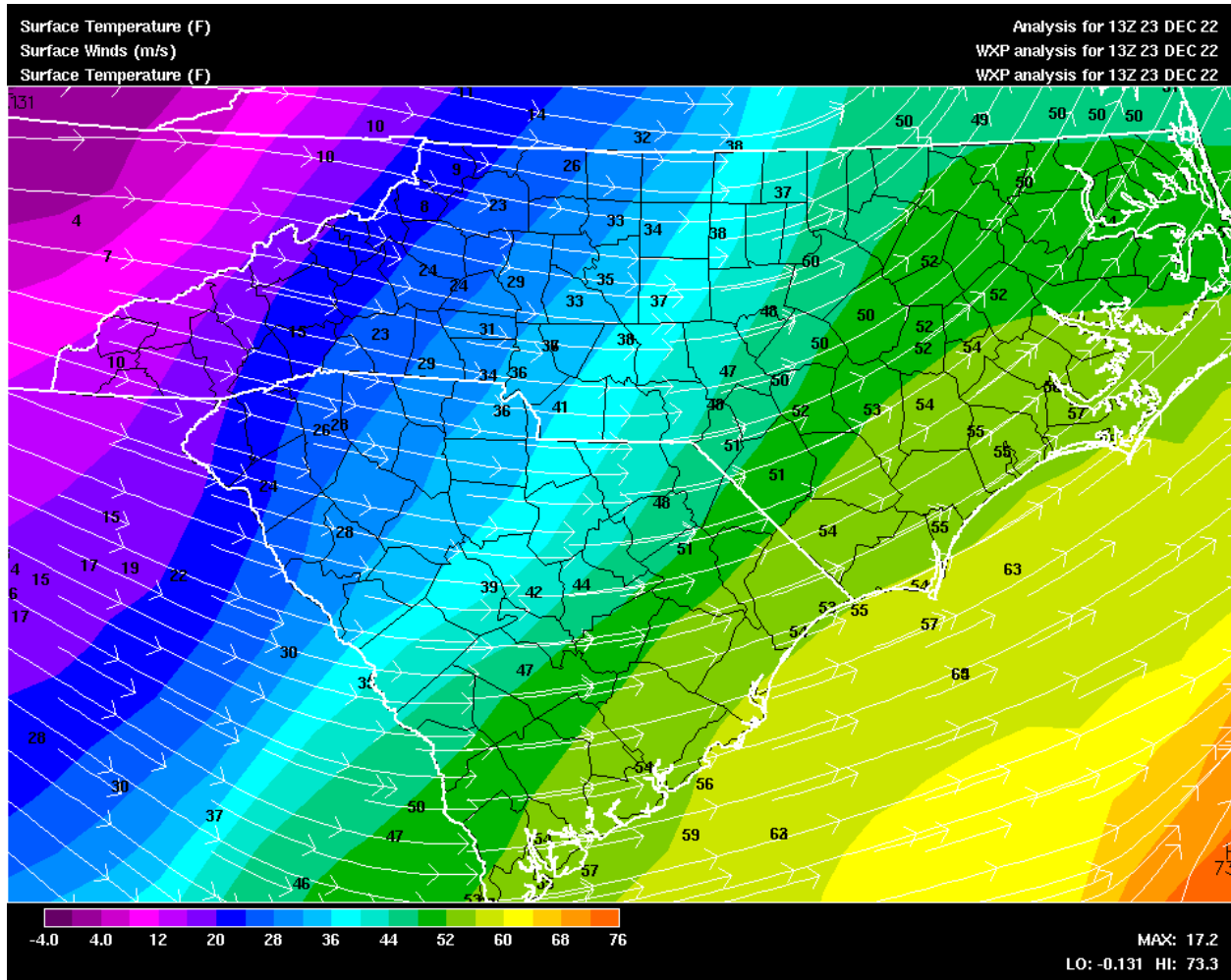
For the next several hours, the strongest peak wind gusts will occur east of a line from Raleigh, NC to Florence, SC.

After 10am, the strongest peak wind gusts are expected only across the eastern half of Coastal Zone.

By 12pm, the strongest peak wind gusts will have moved offshore.

Below that is a graphic showing the surface temperatures at 8am. The very cold air mass west of the Appalachians will spread eastward across the Carolinas through the day.





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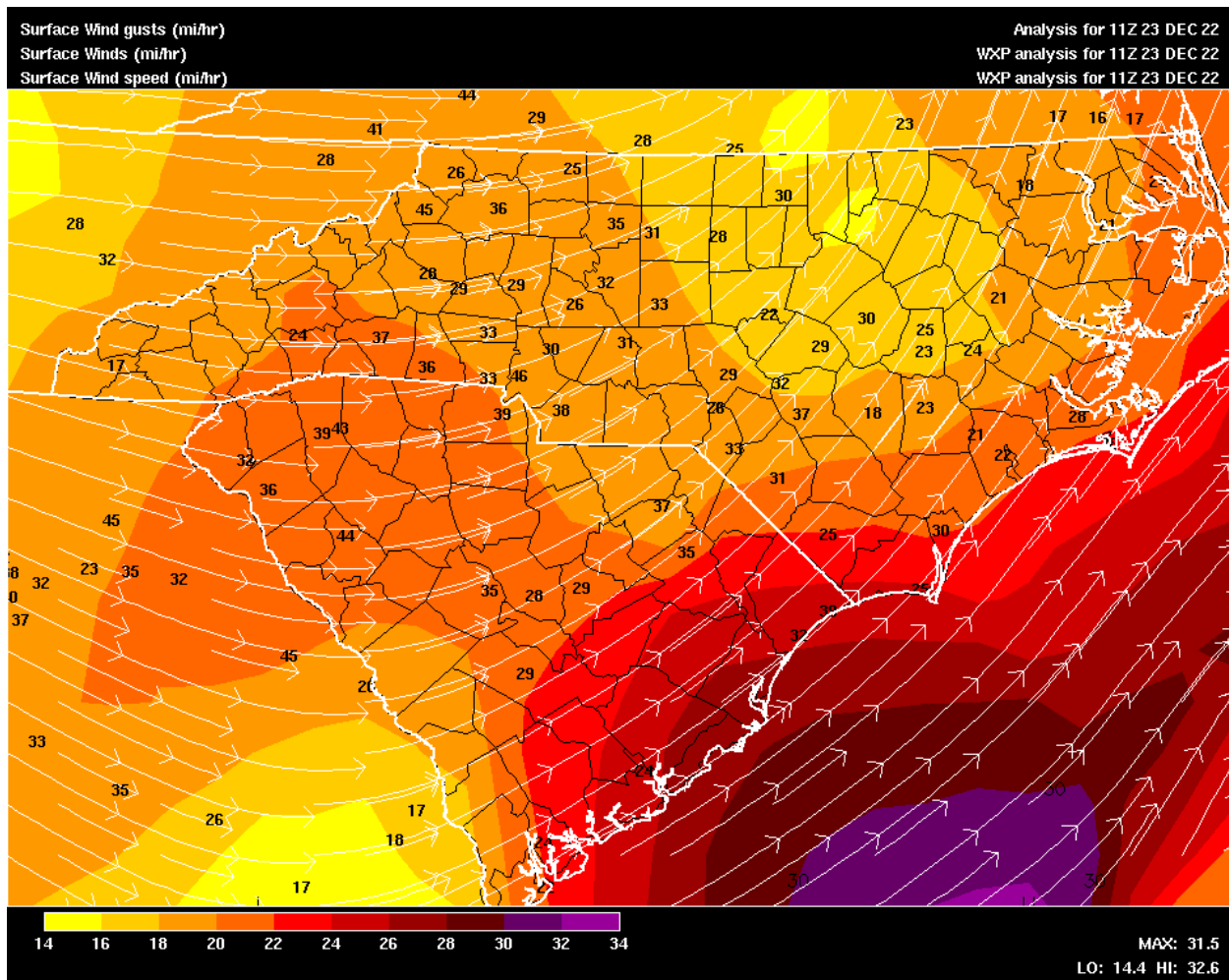
From: Duke Meteorology [REDACTED]
Sent: Friday, December 23, 2022 6:26 AM
To: Weather-CAR-Outlook [REDACTED]; Weather-CAR-Alerts [REDACTED]
Subject: Carolinas Daily Weather Outlook - 12/23/2022

Significant power outages are expected across the Carolinas Service Area through this evening due to wind gusts up to 55 mph across the Mountain Zone and wind gusts of 40 to 50 mph across the other zones. Peak gusts east of the mountains/foothills will occur this morning as the cold front sweeps across the region. Storm details can be found below. Additional scattered power outages are likely across the Mountain Zone tonight through Saturday due to wind gusts up to 45 mph. Otherwise, weather-related outages are not expected Saturday – Tuesday. Dangerous wind chills will prevail across the region this afternoon through tomorrow morning.

As of 6am, widespread power outages have already developed across the Upstate Zone due to wind gusts of 35 to 45 mph. Scattered outages have already occurred across the Mountain Zone and the Central Zone.

The Charlotte airport had a peak wind gust of 46 mph at 5:45am.

Below is a map of 6am winds across the region. The colors represent the sustained wind speeds while the text represents the peak gusts.





Carolinas Weather Outlook

Issued: 12/23/2022 6:16 AM

Carolinas – West	Fri 12/23	Sat 12/24	Sun 12/25	Mon 12/26
Mountains	Wind gusts up to 55 mph during the day; up to 45 mph overnight	Wind chills -10F to -20F in the morning; wind gusts up to 45 mph during the day		
Triad	Wind gusts up to 45 mph through mid-morning, then gusts 35 to 40 mph	Wind chills around -5F in the morning		
Central	Wind gusts up to 45 mph early, then gusts 35 to 40 mph	Wind chills around 0F in the morning		
Upstate	Wind gusts up to 45 mph early, then gusts 30 to 35 mph	Wind chills around 0F in the morning		

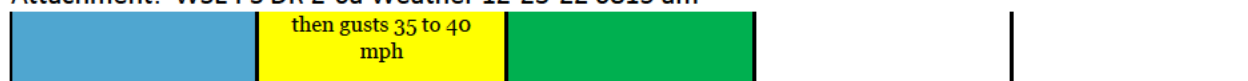
Carolinas – East	Fri 12/23	Sat 12/24	Sun 12/25	Mon 12/26
Triangle North	Wind gusts up to 50 mph in the morning, then gusts 35 to 40 mph	Wind chills around -5F in the morning		
Triangle South	Wind gusts up to 50 mph in the morning, then gusts 35 to 40 mph	Wind chills around 0F in the morning		
Coastal	Wind gusts up to 50 mph in the morning, then gusts 35 to 40 mph	Wind chills around 5F in the morning		
Pee Dee	Wind gusts up to 50 mph in the morning,	Wind chills around 5F in the morning		

Duke Energy Carolinas, LLC and Duke Energy Progress, LLC

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Public Staff Data Request No. 2 – Questions on Winter Storm Elliott

Attachment: WSE PS DR 2-6a Weather 12-23-22 0815 am



*To see a comprehensive map of the Duke Energy Carolinas Distribution Zones, click [here](#).

** For customer outage projection terminology, click [here](#).

3-Day Carolinas Weather Forecast

Today: Sunny, windy and very cold. Temperatures at daybreak in the 30s and 40s west, 40s and 50s east. Afternoon temperatures in the lower and middle 20s west, middle and upper 20s east. West wind 15 to 25 mph, gusting to 50 mph.

Tonight: Clear, blustery and cold. Lows in the upper single digits to middle teens, except -5F to 5F in the mountains/foothills.

Saturday: Sunny and very cold. Highs in the upper 20s and lower 30s. West wind around 10 mph.

Sunday: Sunny and very cold. Lows in the middle teens. Highs in the lower and middle 30s west, upper 30s east. West wind 5 to 10 mph.

Weather Discussion

Significant power outages are likely through this evening due to wind gusts up to 55 mph across the Mountain Zone and wind gusts of 40 to 50 mph elsewhere. Storm details can be found below. Additional scattered power outages are likely across the Mountain Zone on Saturday due to wind gusts up to 45 mph. Otherwise, weather-related outages are not expected Saturday – Tuesday.

A band of precipitation associated with a strong arctic front will sweep through the area early this morning with rain changing over to a brief period of snow across the mountains and foothills along/north of I-40. Cold arctic air will quickly spill into the area throughout the morning hours behind the front. Wind will become gusty starting early this morning and will lead to dangerously cold wind chills across the NC mountains/foothills today. The dangerously cold wind chills will continue across the mountains and will expand into the rest of the area this evening into early Saturday. The cold and dry air mass lingers through the holiday weekend, but temperatures will be on a gradual warming trend during this time.

Significant power outages are likely across the Carolinas Service Area through this evening due to very strong and gusty winds in association with this cold front passage. For the Mountain Zone, wind gusts up to 55 mph are expected through this afternoon, then wind gusts up to 45 mph are likely

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tonight and Saturday. Elsewhere, wind gusts of 40 to 50 mph are expected through midday (strongest to the southeast of I-85), then gusts of 30 to 40 mph are likely through the afternoon hours.

Temperatures will be falling throughout the day, from the 40s and 50s early this morning to the 20s by mid/late afternoon and then teens this evening. The combination of the arctic air mass and the strong winds will result in very cold wind chills across the region this afternoon through Saturday morning. For the higher elevations, minimum wind chills will be -10F to -20F. To the east, minimum wind chills will be -5F to +5F.

EXTENDED FORECAST

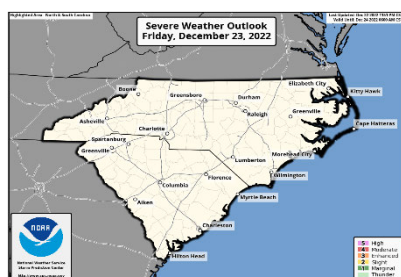
The main story for the holiday weekend is the arctic air mass that will prevail across the eastern US. Temperatures will be 15 to 25 degrees below normal; coldest on Saturday with slight moderation Sunday and Monday. Dry conditions are expected each day.

Saturday will be sunny with low temps in the upper single digits and lower teens west, low-mid teens east followed by high temps in upper 20s to lower 30s. Sunday will be slightly warmer, starting in the mid teens followed by highs in the 30s. On Monday, temperatures will start out in the upper teens and reach the middle 30s to lower 40s.

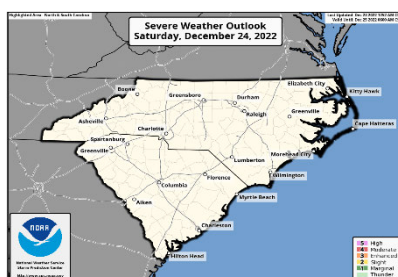
Temperatures will continue to gradually moderate through the week, returning to seasonal levels on Thursday and slightly above seasonal levels on Friday. The 11-15 day period looks seasonably warm with temperatures averaging 10 to 12 degrees above normal.

**For Duke zone temperature forecasts, click [here](#). For satellite, radar and lightning graphics, click [here](#).*

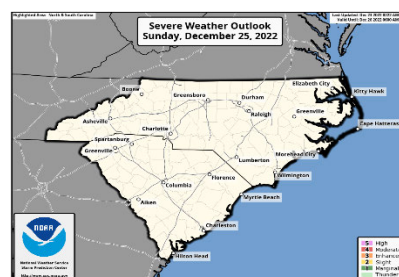
SPC Outlook Day 1



SPC Outlook Day 2



SPC Outlook Day 3



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