

**From:** Duke Meteorology  
**Sent:** Wednesday, December 21, 2022 6:09 AM  
**To:** Weather-CAR-Discussion  
**Subject:** Carolinas Weather Forecast Discussion - 12/21/2022

**Wednesday – Friday:**

- Cold high pressure will extend from the Mid-Atlantic to the Carolinas through early tonight. A storm system off the Southeast US coast will then move north across the eastern Carolinas Thursday and up the Mid-Atlantic coast Thursday night. An arctic cold front will approach from the west Thursday night and blast across the region early Friday.
- Looks like we will have a cold-air-damming pattern across the western/central Carolinas on Thursday while the storm system tracks up the coast. As a result, our forecast is following the colder side of the model guidance for Thursday into Thursday night. Very low confidence in the hour-by-hour temps on Friday as the arctic air comes in behind the front. Will be windy/gusty across the region on Friday, so wind chills in the teens will have an additional significant impact on the system.
- For today, mostly sunny skies along and northwest of I-85 with partly to mostly cloudy skies to the southeast. Could see a few light rain showers across southern sections mid/late afternoon. Highs in the middle 40s west, upper 40s east.
- Mostly cloudy skies tonight. Scattered showers this evening, becoming widespread after midnight. Still expecting some light freezing rain across northwestern NC overnight, but rain elsewhere. Temperatures dropping into the mid/upper 30s west, low/mid 40s east. Ice accumulations up to 0.10" across the northern NC mountains; highest amounts in northwestern NC.
- Cloudy with rain tomorrow. Mainly in the morning for the DEC region, but lasting through mid/late afternoon for the DEP region.
- For DEC, temps will climb very slowly through the day, only reaching the upper 30s and lower 40s by late afternoon. For DEP, expecting highs only in the mid/upper 40s across interior sections, though coastal locations will be much milder (50s and 60s).
- Dry conditions on Thursday night. Temperatures nearly steady in the upper 30s to middle 40s.
- The arctic cold front is expected to surge through the area Friday morning, ushering cold and dry air along with gusting winds. Expecting wind gusts 45-55 mph across higher elevations, 35-45 mph elsewhere.
- The hourly temperature curve on Friday will be quite challenging. Our forecast reflects a blend of the model guidance.
- For DEC, have the sys avg in the mid-30s at daybreak, then falling into the low-mid 20s by mid-morning and holding nearly steady there through late afternoon.
- For DEP, have the sys avg in the upper 40s at daybreak, then falling into the mid-upper 30s mid-morning, then upper 20s and lower 30s early afternoon and mid/upper 20s late afternoon.
- On Friday afternoon, wind chills will be in the teens and upper single digits across the DEC region, and teens to middle 20s across the DEP region.

**Extended Range:**

- The main story is the arctic air mass that will prevail across the eastern US Saturday – Monday.
- Sunny skies on Saturday. The forecasts for Sat AM have trended 3 deg colder since yesterday. Now looking at DEC lows in the low-mid teens (sys avg 13) and DEP lows in the mid-upper teens (sys avg 16). Highs in the upper 20s and lower 30s.
- Sunny skies on Sunday. Lows in the mid-upper teens (DEC avg 16, DEP avg 17). Highs in the low-mid 30s west, upper 30s east.
- Sunny skies on Monday. Lows in the upper teens (DEC avg 19, DEP avg 19). Highs in the upper 30s west, low-mid 40s east.

- Sunny skies on Tuesday. Lows in the low-mid 20s (DEC avg 24, DEP avg 25). Highs in the low-mid 40s west, mid-upper 40s east.
- Milder conditions for the rest of the week with lows in the 30s and highs in the 50s.
- The 11-15 day period looks very warm with temperatures averaging 10-12 deg above normal.

