

Hurricane Florence

Category 4 major hurricane (SSHWS/NWS)



Hurricane Florence near peak intensity southeast of [Bermuda](#) on September 10

Formed August 31, 2018

Dissipated September 19, 2018

([Remnant low](#) after September 17)

Highest winds *1-minute sustained*: 140 mph (220 km/h)

Lowest pressure 939 [mbar](#) (hPa); 27.73 [inHg](#)

Fatalities 24 direct, 16 indirect

Damage > \$17 billion (2018 [USD](#))

Areas affected [West Africa](#), [Cape Verde](#), [Bermuda](#), [Eastern United States](#) (especially the [Carolinas](#)), [Atlantic Canada](#)

Part of the [2018 Atlantic hurricane season](#)

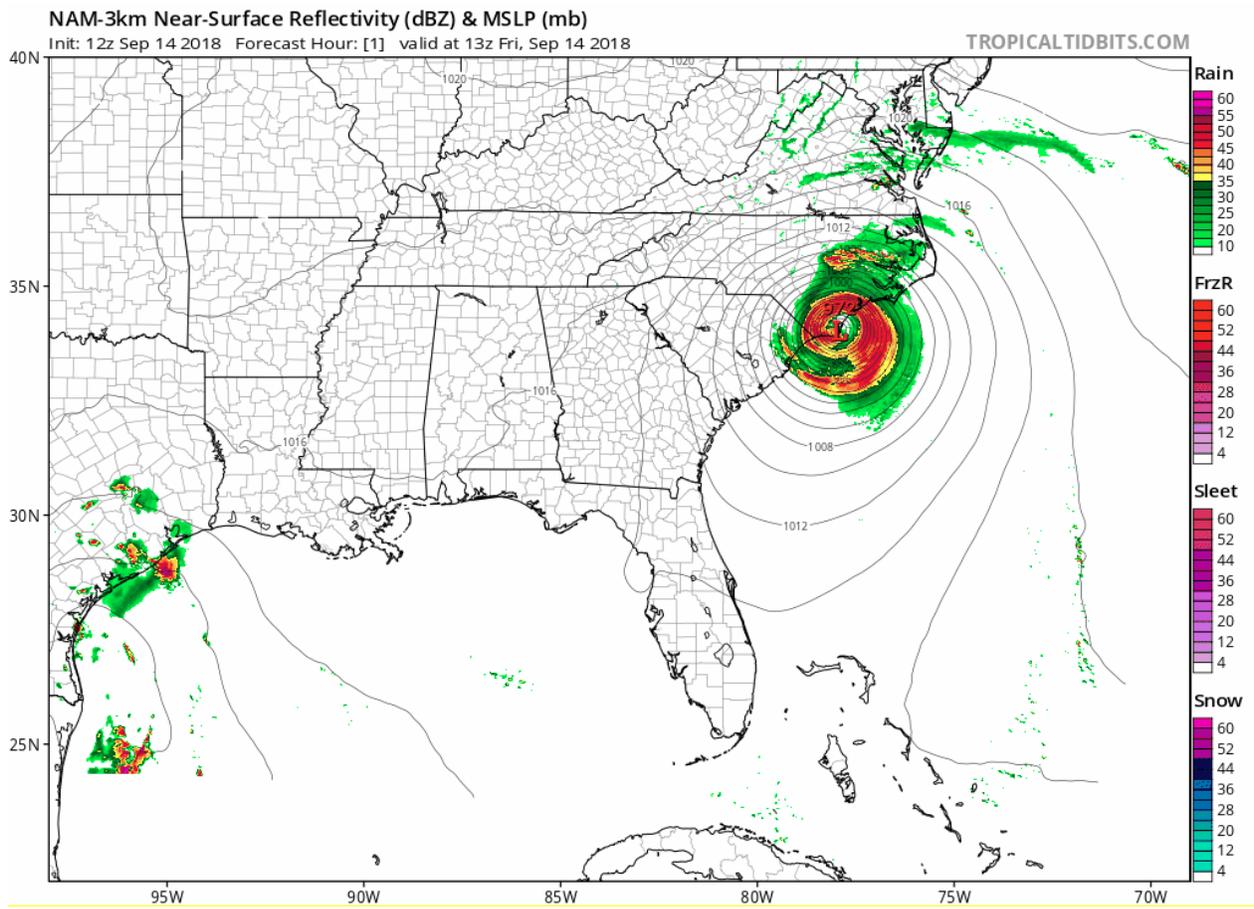
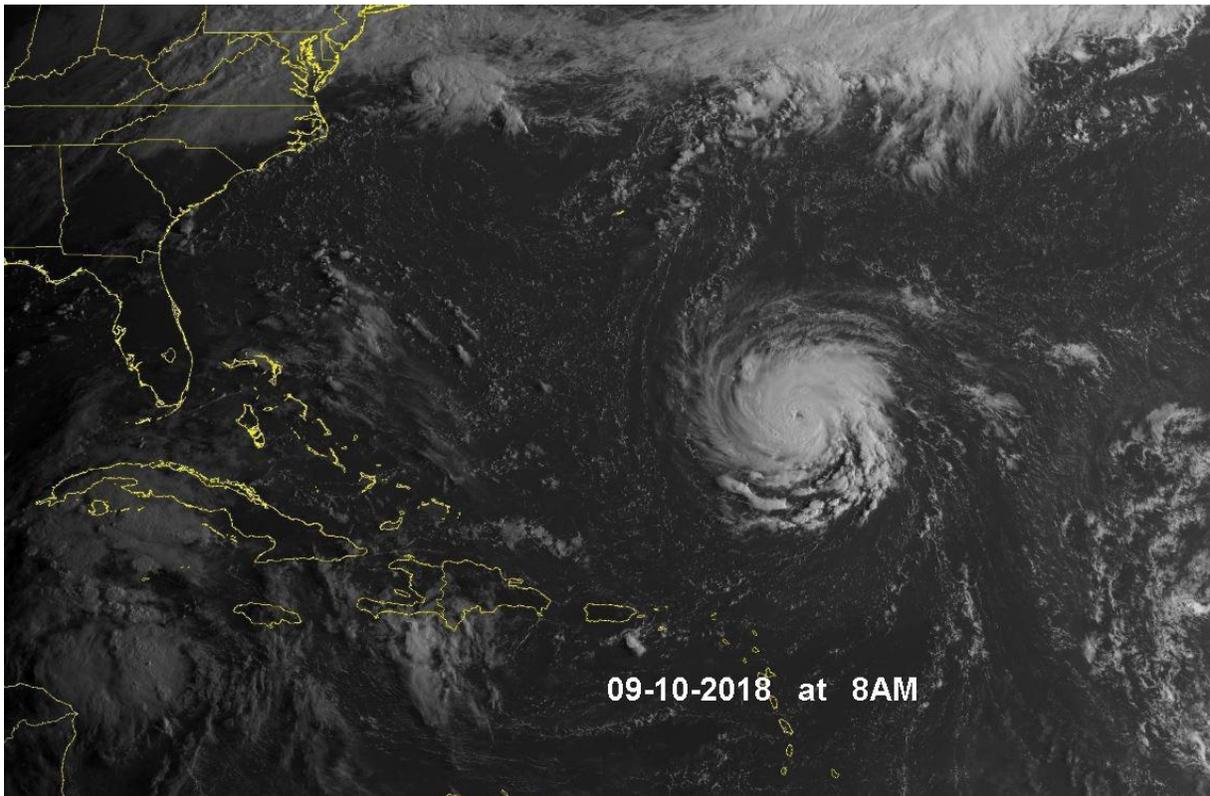
Hurricane Florence

Hurricane Florence was a powerful and long-lived Cape Verde hurricane, as well as the wettest tropical cyclone on record in the Carolinas and the ninth-wettest tropical cyclone to affect the contiguous United States. The sixth named storm, third hurricane, and the first major hurricane of the 2018 Atlantic hurricane season, Florence originated from a strong tropical wave that emerged off the west coast of Africa on August 30, 2018. Steady organization resulted in the formation of a tropical depression on the next day near Cape Verde. Progressing along a steady west-northwest trajectory, the system acquired tropical storm strength on September 1, and fluctuated in strength for several days over open ocean. An unexpected bout of rapid intensification ensued on September 4–5, culminating with Florence becoming a Category 4 major hurricane on the Saffir–Simpson scale with estimated maximum sustained winds of 130 mph (215 km/h).

Strong wind shear tore the storm apart, and Florence degraded to a tropical storm by September 7. Shifting steering currents led to a westward turn into a more suitable environment; the system regained hurricane strength on September 9 and major hurricane status by the following day. At 16:00 UTC on September 10, Florence again became a Category 4 hurricane, later reaching a new peak intensity with 1-minute winds of 140 mph (220 km/h) and a central pressure of 939 mbar (27.7 inHg). Afterwards, Florence weakened slightly as it underwent an eyewall replacement cycle, but began to re-strengthen late on September 11. However, increasing wind shear caused the storm's winds to gradually taper over the next few days, though the storm's wind field continued to grow. By the evening of September 13, Florence had been downgraded to a Category 1 hurricane, though the storm began to stall as it neared the Carolina coastline. Early the next day on September 14, Florence made landfall just south of Wrightsville Beach, North Carolina, and weakened further as it slowly moved inland.

Early in the storm's history, the system brought squall conditions to the Cape Verde islands, resulting in some landslides and flooding; but overall effects were negligible. With the threat of a major impact in the Southeastern and Mid-Atlantic United States becoming evident by September 7, the governors of North Carolina, South Carolina, Virginia, Georgia, and Maryland, and the mayor of Washington, D.C. declared a state of emergency. On September 10 and 11, the states of North Carolina, South Carolina, and Virginia all issued mandatory evacuation orders for some of their coastal communities, expecting that emergency personnel would be unable to reach people there once the storm arrived.

Despite making landfall as a weakened Category 1 hurricane, it still had enough wind speed to uproot trees and cause widespread power outages throughout the Carolinas. The same wind shear that weakened the storm also stalled its forward motion for several days after making landfall; moving forward at only 2 to 3 miles per hour, it continually dumped heaving rains along coastal areas from September 13, when the outer rain bands first began to be felt, to September 15, when the storm was still stalled out only a few miles west of Wilmington. Coupled with storm surge, this caused widespread flooding along a long stretch of North Carolina coast from New Bern to Wilmington. As the storm moved inland, from September 15 to 17, heavy rain caused widespread inland flooding, inundating such cities as Fayetteville, Smithfield, Lumberton, Durham, and Chapel Hill, as major rivers such as the Neuse River, Eno River, Cape Fear River, and Lumber River all spilled over their banks. Most major roads and highways in the area experienced some flooding, with large stretches of I-40, I-95 and US 70 remaining impassable for days after the storm had passed. The city of Wilmington was cut off entirely from the rest of the mainland. The storm also spawned tornadoes in several places along its path. Many places had record-breaking rainfall, more than 30 inches; at least 39 deaths were attributed to the storm; and damage so far is estimated at more than



This is the first time I can remember the NWS forecast for a HURRICANE in the Glen Allen area. It looked like we might lose power for at least one week.

NWS Forecast for: 3 Miles WNW Laurel VA

Issued by: National Weather Service Wakefield, VA

Last Update: 10:22 am EDT Sep 10, 2018

Hazardous Weather Outlook

Today: A chance of showers and thunderstorms, mainly after 2pm. Mostly cloudy, with a high near 83. East wind around 6 mph becoming south in the afternoon. Chance of precipitation is 30%. New rainfall amounts of less than a tenth of an inch, except higher amounts possible in thunderstorms.

Tonight: A chance of showers and thunderstorms, mainly before 2am. Mostly cloudy, with a low around 71. Southeast wind around 5 mph becoming calm after midnight. Chance of precipitation is 30%. New rainfall amounts of less than a tenth of an inch, except higher amounts possible in thunderstorms.

Tuesday: A chance of showers and thunderstorms, mainly after 8am. Mostly cloudy, with a high near 85. Calm wind. Chance of precipitation is 50%. New rainfall amounts of less than a tenth of an inch, except higher amounts possible in thunderstorms.

Tuesday Night: A chance of showers and thunderstorms. Mostly cloudy, with a low around 71. Calm wind. Chance of precipitation is 50%. New rainfall amounts of less than a tenth of an inch, except higher amounts possible in thunderstorms.

Wednesday: A chance of showers and thunderstorms. Mostly cloudy, with a high near 86. Calm wind becoming northeast around 5 mph in the afternoon. Chance of precipitation is 40%. New rainfall amounts between a tenth and quarter of an inch, except higher amounts possible in thunderstorms.

Wednesday Night: A chance of showers and thunderstorms. Mostly cloudy, with a low around 72. Chance of precipitation is 30%. New rainfall amounts of less than a tenth of an inch, except higher amounts possible in thunderstorms.

Thursday: Tropical storm conditions possible. A chance of showers and thunderstorms. Partly sunny, with a high near 84. Chance of precipitation is 40%.

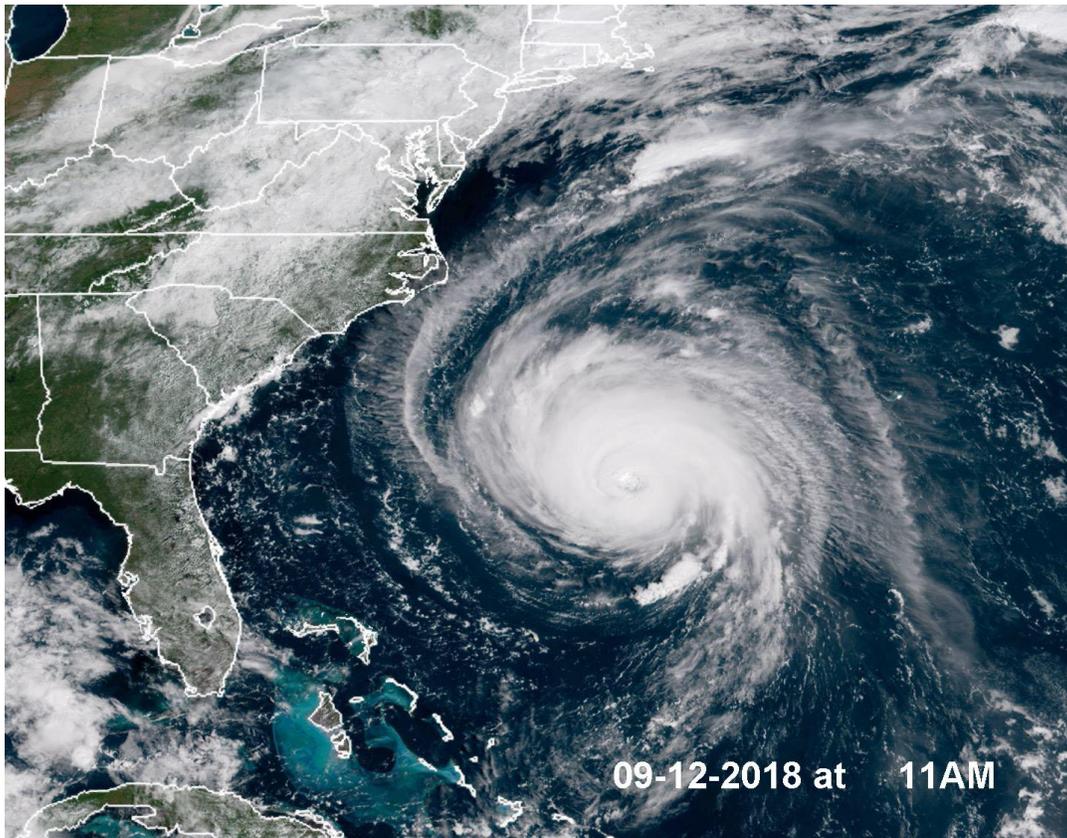
Thursday Night: Hurricane conditions possible. A chance of showers. Mostly cloudy, with a low around 72. Chance of precipitation is 50%.

Friday: Hurricane conditions possible. Showers and thunderstorms likely. Mostly cloudy, with a high near 80. Chance of precipitation is 60%.

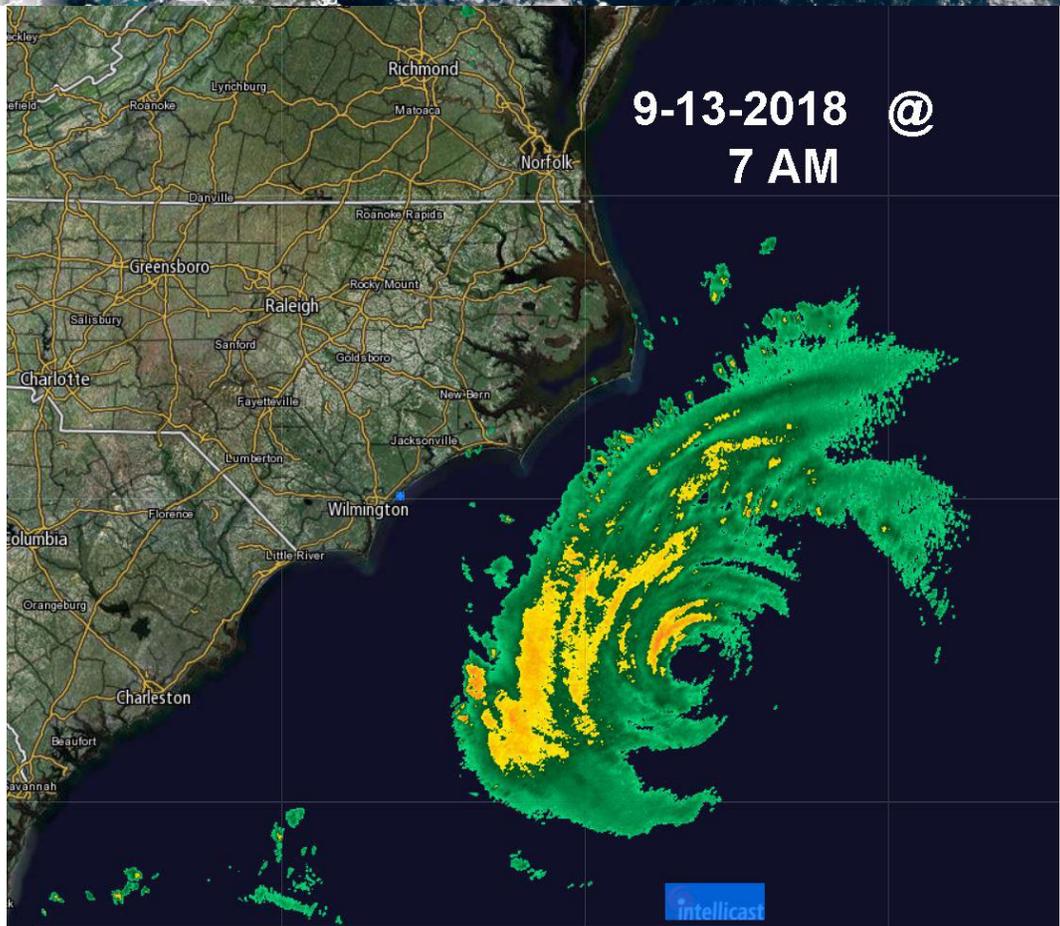
Friday Night: Showers and thunderstorms likely. Mostly cloudy, with a low around 71. Chance of precipitation is 60%.

Saturday: A chance of showers and thunderstorms. Mostly cloudy, with a high near 80. Chance of precipitation is 50%.

Saturday Night: A chance of showers and thunderstorms. Mostly cloudy, with a low around 69. Chance of precipitation is 50%.

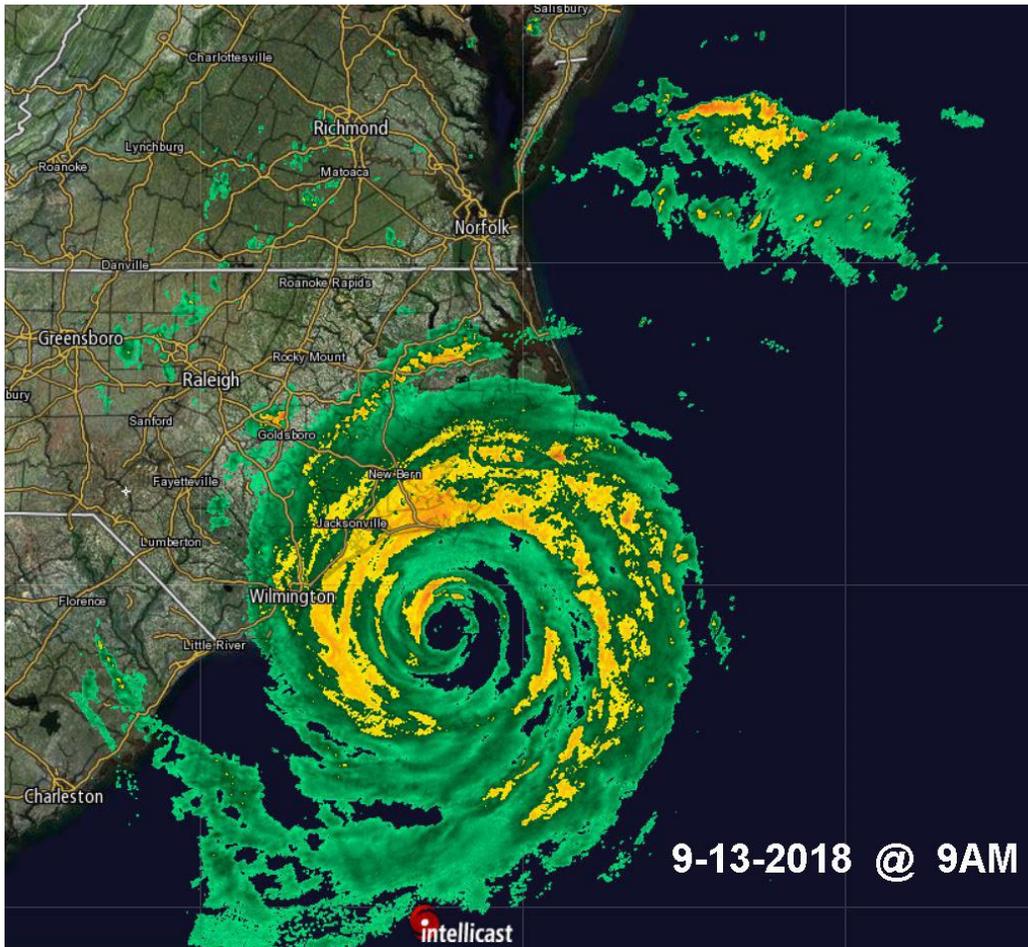


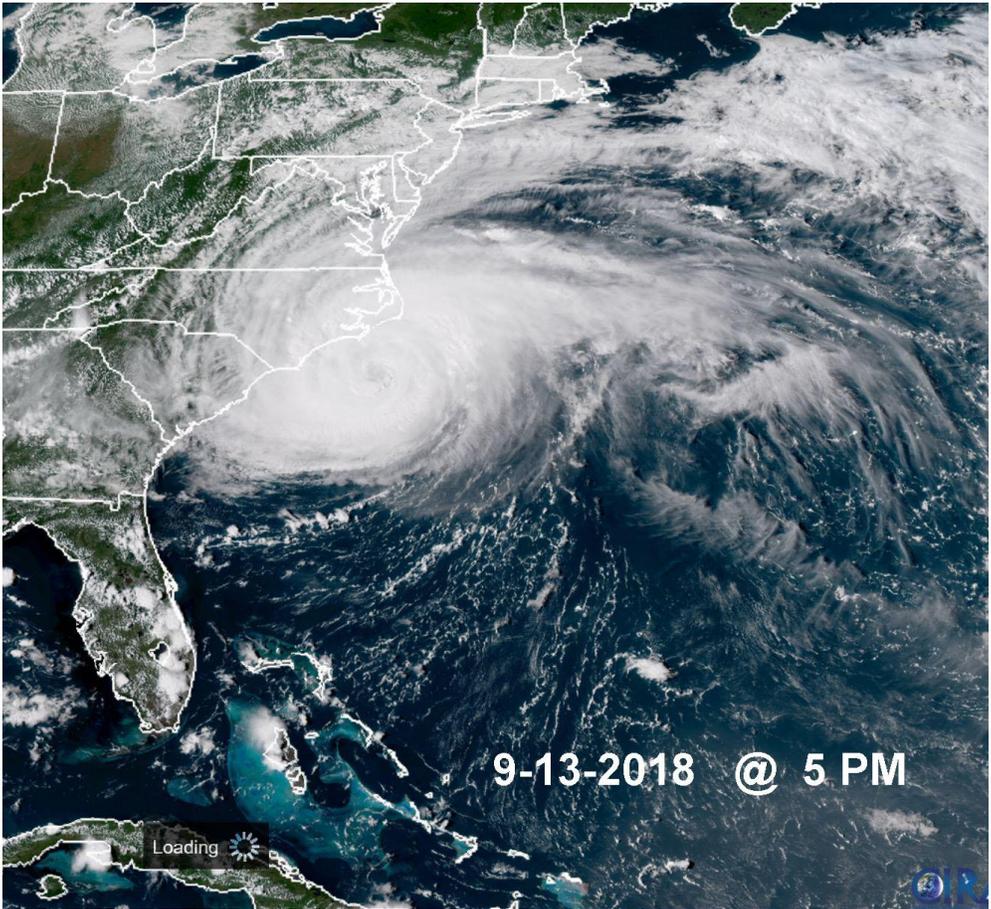
09-12-2018 at 11AM



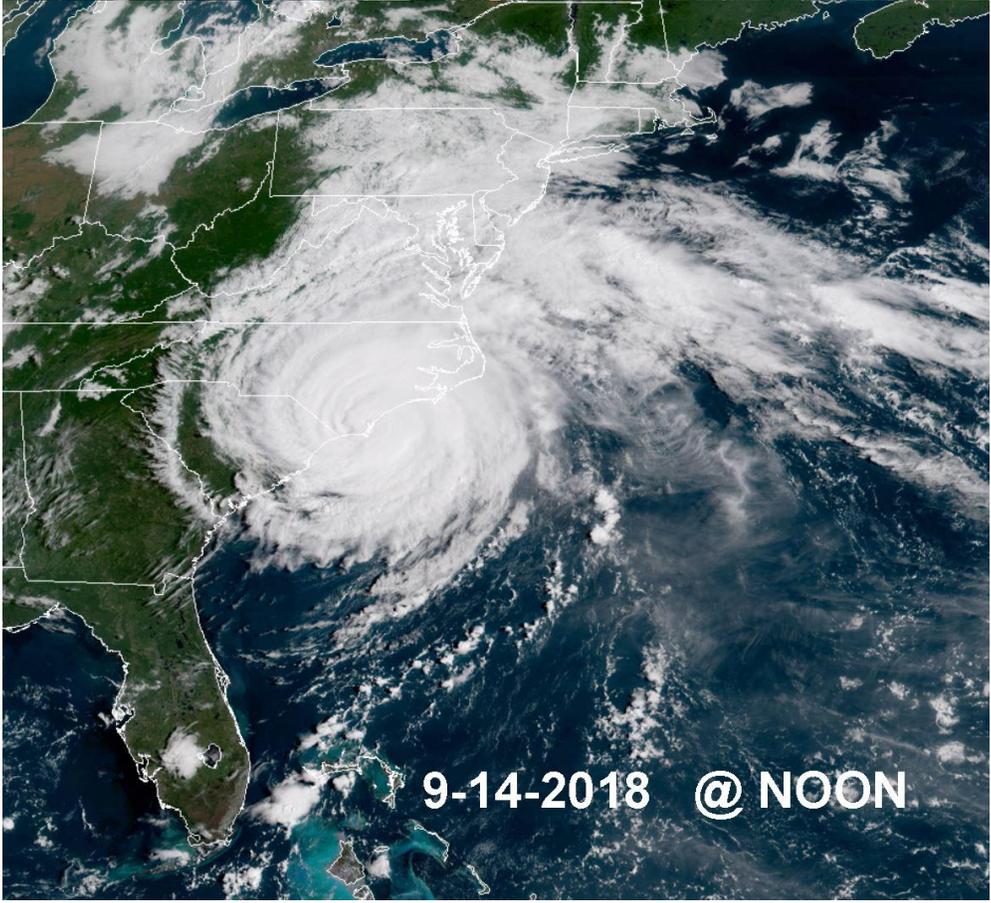
9-13-2018 @ 7 AM

intellecast

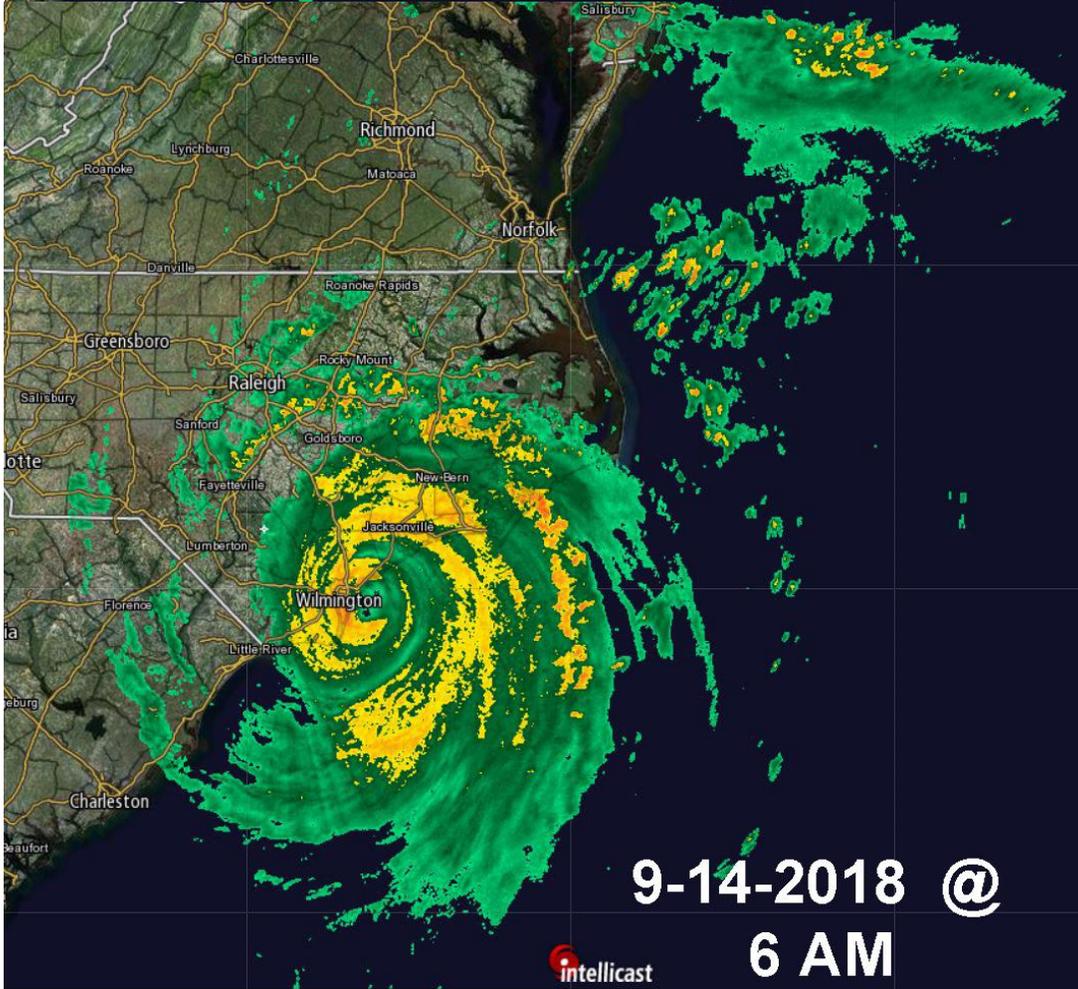




9-13-2018 @ 5 PM



9-14-2018 @ NOON



intellicast

intellicast



BEFORE



AFTER

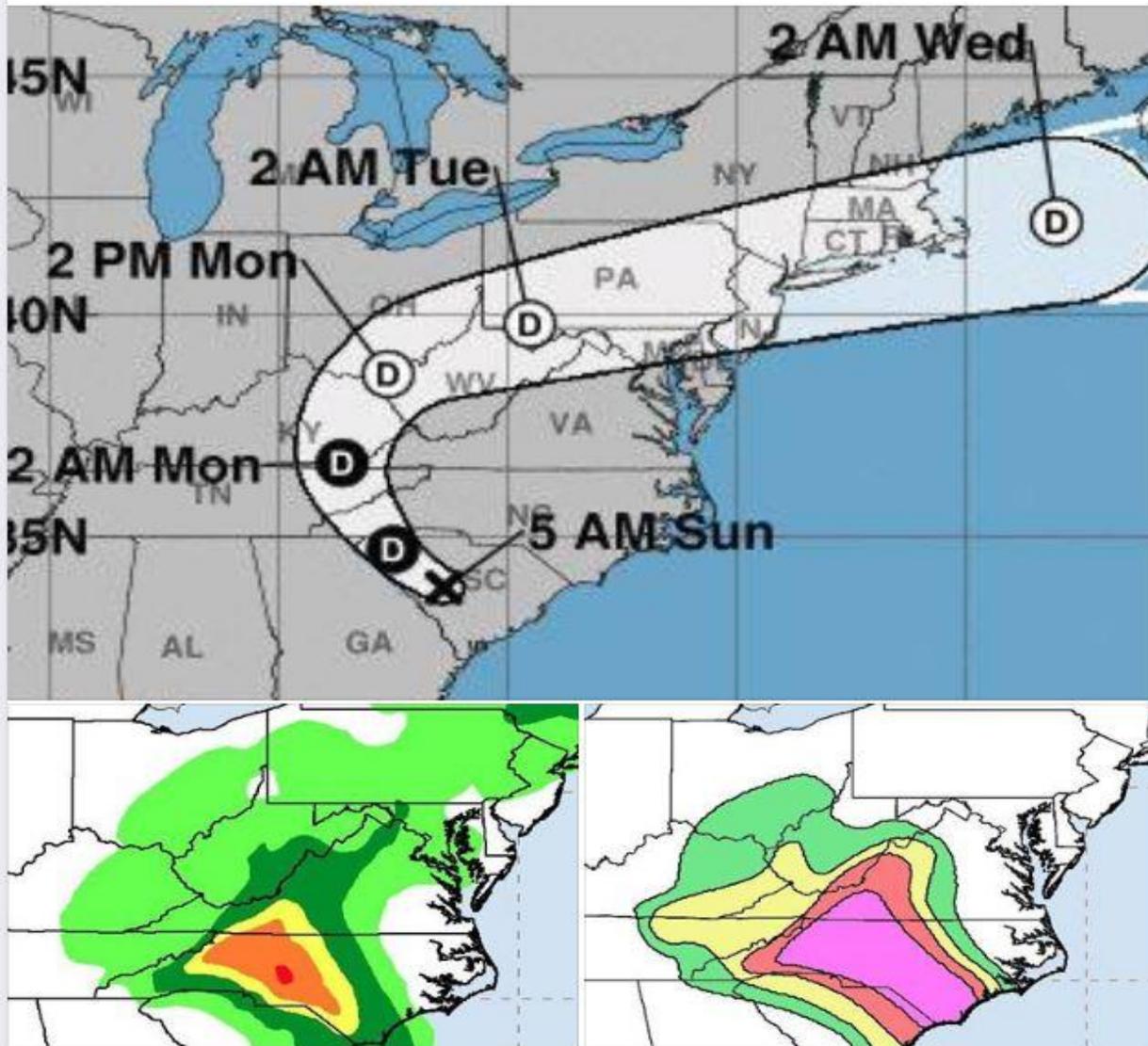


Lyle Alexander

6 mins · 🌐



Florence is now a tropical depression with winds of 35 mph centered over central South Carolina. As of 5 AM it was moving west at 8 mph. It will accelerate and turn to the northwest today. Monday it will continue north and northeast across eastern Kentucky and lose its tropical characteristics. Widespread mostly moderate to heavy rain continues this morning across almost all of North Carolina, the northern half of South Carolina and into portions of southwest Virginia and eastern Tennessee. Several more inches of rain can be expected. Flash flooding can occur in western and southern North Carolina, northeast South Carolina and a large portion of southwest Virginia. Below I have the track of Florence, a rainfall map and a flash flood potential map. For the rainfall, I left off the legend and put my expected rainfall for the various colors.



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Chief Meteorologist-WEATHER America

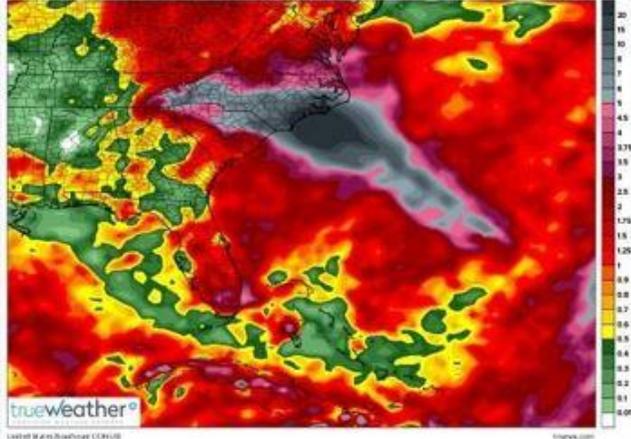
Larry Cosgrove

Chief Meteorologist-WEATHER America

With the landfall of Major Hurricane Florence less than 48 hours away, it would be wise to go over some of the expected characteristics and impacts of the storm. Florence is an annular type of hurricane, in some respects like Hugo (1989). The difference here is that the numerical models have a much slower track scenario after the eye comes in just above Wilmington NC early Friday. Systems such as these have very focused wind impacts, so the space between Myrtle Beach SC and Cape Lookout NC are in for a brutal beatdown of wind and storm surge. I have noticed that Florence has been gathering a steady stream of tropical moisture from the Caribbean and Sargasso Seas. Given that the hurricane will be slowing down, on a basically westerly track along the NC/SC border beginning Sunday, this motion implies a broad stretch of heavy flooding potential with up to two feet of rainwater. Added to all that moisture will be pop up tornadoes and microbursts. While hurricane force winds should be gone by Monday, the chances for damage and injury to homeowners, travelers, and utility workers will be very high. Hence the state of emergency from SC into VA. Don't mess with Florence. Listen to local authorities until the storm lifts out early next week. Be aware, stay safe.



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Initial at 06Z Wed, Sep 12 2018 | Forecast Hour: [240] | Valid at 06Z Sat, Sep 22 2018



Major Hurricane FLORENCE, September 14 - 17

- Rainfall As Much As 24"
- Initial Winds 130 MPH
- 8' And Higher Storm Surge
- Many Power Grid Issues
- Restricted Travel In Carolinas
- Widespread Coastal Flooding
- Tornado Threats Probable



STORMVISUALS



Don Schwenneker ✓
@BigweatherABC11



In @CityofWilm the record for yearly #rainfall has been broken, and there's still 106 days to go! The record, #btw is from 1877, over 140 years ago!!! #ncwx



Hurricane Florence Preliminary Rainfall Reports

North Carolina - As of 2 pm September 17, 2018



Rainfall Total		Rainfall Total		Rainfall Total	
Elizabethtown NC	35.93"	Pink Hill NC	18.31"	Chapel Hill NC	9.18"
Swansboro NC	34.00"	Chadbourn NC	18.23"	Wilson NC	8.75"
Gurganus NC	30.38"	Wallace NC	18.08"	Clayton NC	8.57"
Hoffman Forest NC	29.62"	Clinton NC	17.85"	Fairview NC	7.86"
Hampstead NC	29.52"	Trent Woods NC	17.28"	Concord NC	7.62"
Sunny Point NC	27.44"	New Bern NC	16.65"	Aho NC	7.29"
Oak Island NC	26.98"	Stedman NC	16.38"	Garner NC	7.12"
Wilmington NC	26.58"	Cameron NC	16.36"	Greensboro NC	6.99"
Whiteville NC	25.91"	Pine Knoll Shores NC	16.32"	Raleigh NC	6.98"
Jacksonville NC	25.28"	Fayetteville NC	15.27"	Williamston NC	6.93"
Newport NC (NWS Office)	25.20"	Roseboro NC	15.15"	Washington NC	6.71"
Mount Olive NC	25.04"	Linden NC	15.11"	Rocky Mount NC	6.33"
Bolivia NC	23.33"	Goldsboro NC	14.39"	Charlotte NC	6.13"
Wilmington ((ILM) NC	23.02"	Rockingham NC	14.37"	Boone NC	6.07"
Emerald Isle NC	23.66"	Raeford NC	14.32"	Gastonia NC	6.06"
Maysville NC	23.14"	Grantsboro NC	14.11"	Rocky Mount NC	6.33"
Lumberton NC	22.76"	Burgaw NC	13.60"	Lawsonville NC	5.70"
Yaupon Beach NC	22.07"	Fort Bragg NC	13.29"	Cape Hatteras NC	5.59"
Supply NC	21.92"	Greenville NC	11.66"	Tarboro NC	5.16"
Cedar Point NC	21.96"	Snow Hill NC	11.50"	North Wilkesboro NC	5.00"
Croatan NC	21.70"	Pittsboro NC	11.40"	Winston-Salem NC	4.85"
Morehead City NC	21.20"	Burnsville NC	11.26"	Yadkinville NC	4.59"
Back Island NC	20.87"	Ashboro NC	10.67"	Edenton NC	4.49"
Hope Mills NC	20.54"	Sparta NC	10.20"	Yanceyville NC	4.15"
Dunn NC	20.41"	Barrett NC	9.97"	Roanoke Rapids NC	3.92"
Sandy Run NC	19.92"	Durham NC	9.58"	Hickory NC	3.72"
Kinston NC	18.88"	Apex NC	9.52"	Asheville NC	3.29"
		Ocracoke NC	9.29"	Elizabeth City NC	2.01"



Hurricane Florence Preliminary Rainfall Reports

South Carolina - As of 2 pm September 17, 2018



Rainfall Total		Rainfall Total		Rainfall Total	
Loris SC	23.81"	Florence SC	7.62"	Chesnee SC	3.56"
Cheraw SC	22.58"	Rock Hill SC	7.48"	Lexington SC	3.54"
Jefferson SC	21.18"	Lancaster SC	7.25"	Gaffney SC	3.50"
Chesterfield SC	19.94"	Kingstree SC	6.89"	Santuck SC	3.50"
Marion SC	19.56"	Catawba SC	6.56"	Irmo SC	3.35"
Dillon SC	18.38"	Camden SC	6.52"	Newberry SC	3.19"
Galivants Ferry SC	16.36"	Manning SC	6.50"	Spartanburg SC	2.92"
Pawleys Island SC	15.95"	McClellanville SC	6.26"	Chapin SC	2.76"
Bennettsville SC	15.68"	Indian Land SC	6.22"	Columbia SC	2.51"
Myrtle Beach SC	15.41"	Tega Clay SC	6.05"	Batesburg SC	2.51"
North Myrtle Beach SC	11.47"	York SC	5.80"	Saluda SC	2.49"
Conway SC	15.55"	Sumter SC	5.46"	Laurens SC	2.27"
Horry SC	13.52"	Tigerville SC	5.22"	Edgefield SC	2.03"
McBee SC	12.77"	Winnsboro SC	5.04"	Greenville-Spartanburg SC	1.87"
Hartsville SC	11.42"	Saint Stephen SC	4.91"	Orangeburg SC	1.20"
Pageland SC	10.26"	Blythewood SC	4.82"	Aiken SC	1.19"
Georgetown SC	8.55"	Lake Wylie SC	4.79"	Charleston SC	1.00"
Darlington SC	8.36"	Bishopville SC	4.53"	Anderson SC	0.45"
Surfside Beach SC	8.29"	Witherbee SC	4.43"	Beaufort SC	0.40"
		Chester SC	4.41"		

NWS Raleigh, NC

Updated Hurricane Florence rainfall totals for North Carolina, South Carolina and Virginia as of 2 pm Monday, September 17, 2018.

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Hurricane Florence Preliminary Rainfall Reports

Virginia - As of 2 pm September 17, 2018



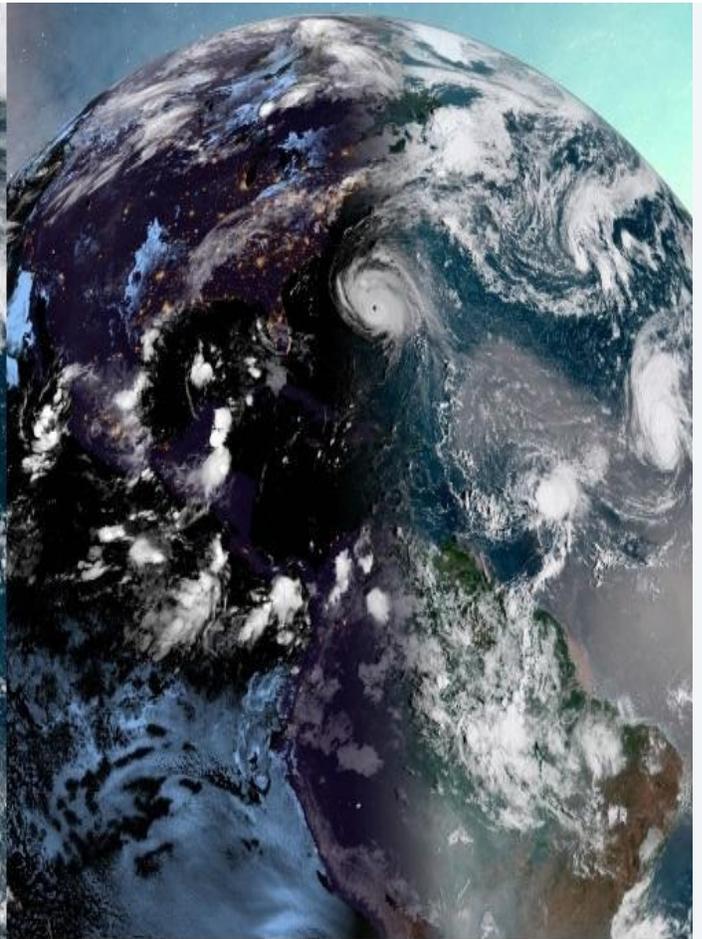
Rainfall Total		Rainfall Total		Rainfall Total	
Meadows of Dan VA	10.56"	Elliots Knob VA	5.61"	Crewe VA	3.17"
Willis VA	9.86"	Shawsville VA	5.60"	Collierstown VA	3.10"
Copper Hill VA	9.54"	Hot Springs VA	5.31"	Roanoke VA	3.04"
Poor Mountain VA	8.92"	Galax VA	5.25"	Chase City VA	2.97"
Callaway VA	8.84"	Poages Mill VA	5.24"	Amherst VA	2.85"
Stuart VA	8.65"	Daleville VA	4.90"	Crozet VA	2.85"
Check VA	8.33"	Stewartsville VA	4.52"	Blacksburg VA	2.74"
Slate Mountain VA	8.13"	Bassett Va	4.37"	Radford VA	2.48"
Bent Mountain VA	6.66"	Floyd VA	4.32"	Appomattox VA	2.52"
Ferrum VA	6.60"	Stuarts Graft VA	4.29"	Covington VA	2.17"
Clarksville VA	6.58"	Martinsville VA	4.24"	Christiansburg VA	2.17"
Clover VA	6.55"	Farmville VA	4.24"	Midlothian VA	2.17"
Big Meadows VA	6.49"	Lunenburg VA	4.10"	Wytheville VA	2.16"
Horse Pasture VA	6.05"	Bassett VA	4.08"	Bedford VA	2.10"
Rocky Mount VA	5.92"	Independence VA	4.05"	Pulaski VA	2.05"
Pipers Gap VA	5.89"	Hillsville VA	3.63"	Lynchburg VA	1.97"
Woolwine VA	5.86"	Salem City VA	3.56"	Palmyra VA	1.88"
Danville VA	5.72"	South Boston VA	3.41"	Chesterfield VA	1.61"
Laurel Fork VA	5.65"	Lexington VA	3.29"	Charlottesville VA	1.04"

Updated Hurricane Florence rainfall totals for North Carolina, South Carolina and Virginia as of 2 pm Monday September 17th.

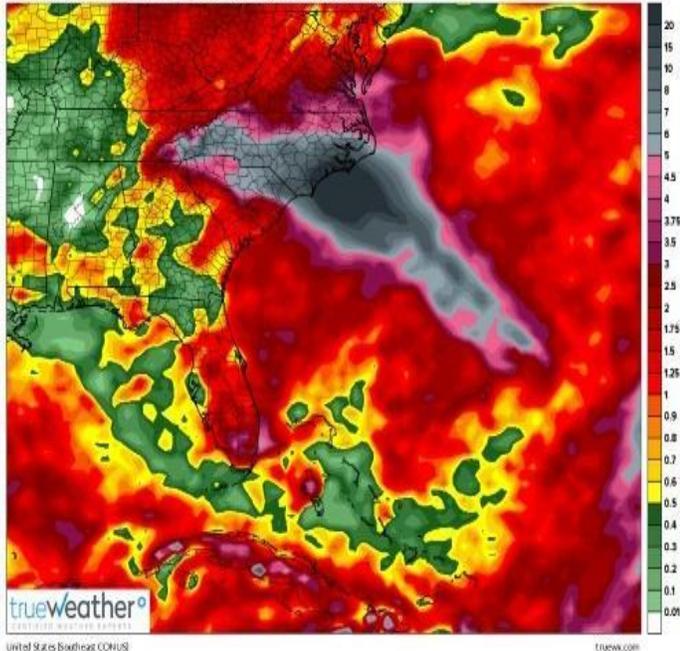
Larry Cosgrove

Chief Meteorologist, WEATHERAmerica
Houston, Texas

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Diane Wilson
@DWilsonABC11



With the wet ground and the old trees of Wilmington it was common to see trees that were uprooted over many parts of the city.