

Tropical Cyclone Debby

Open File Report

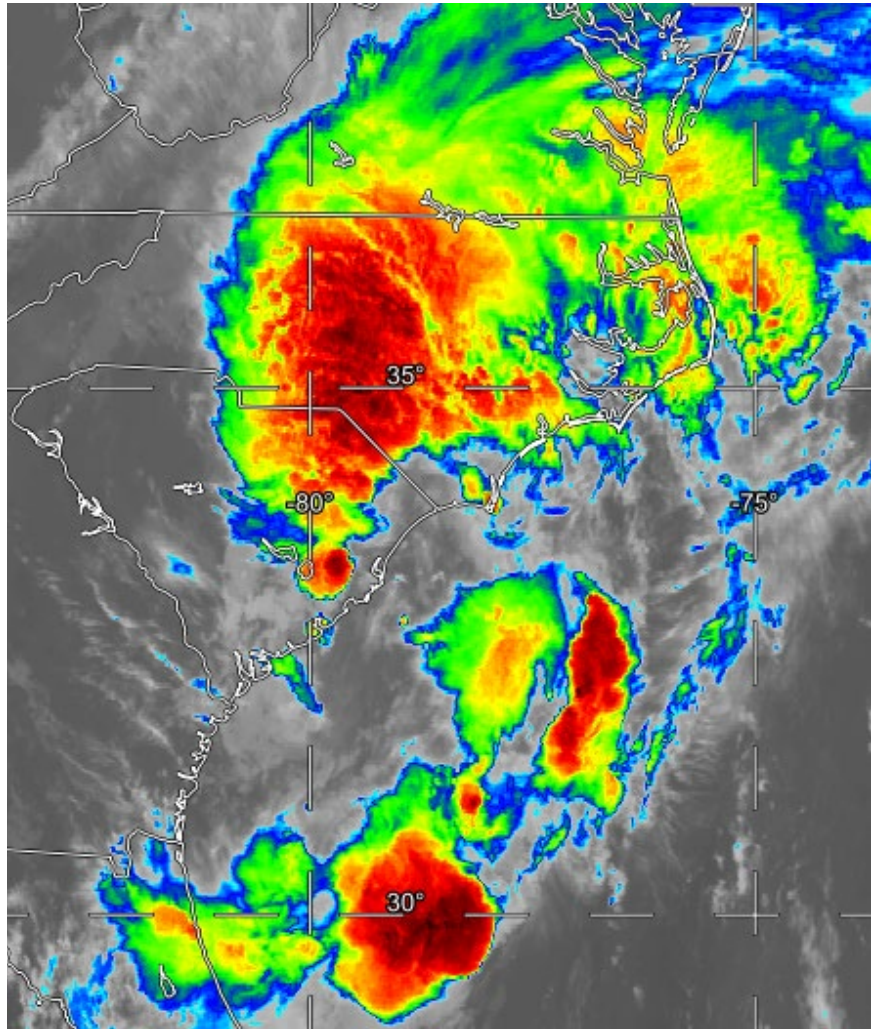
Prepared by the South Carolina State Climatology Office

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Website: <https://www.dnr.sc.gov/climate/sco/>

Storm History and Impacts Report



This color enhanced infrared satellite image shows Debby at 1:50 a.m. EDT on August 8, 2024, around the time it made its second landfall near Bulls Bay.

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This report serves as a preliminary dissemination of information on the impacts of Tropical Cyclone Debby across South Carolina. If you have any additional questions regarding the data provided in this document, please contact Frank Strait, Hope Mizzell, or Melissa Griffin at the State Climatology Office.

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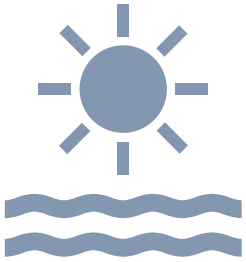
Debby Meteorological Overview



Highest Rainfall Total:

22.02" at Moncks Corner 6 SW (August 5 – 9)*

**Second-highest rainfall total from a tropical cyclone or tropical cyclone remnants since 1956*



New Record Stream Crests: 4

(Salkehatchie, Coosawhatchie, Ashley, Ireland Creek)



Confirmed Tornadoes: 8

EF-0: 4

EF-1: 4



Highest Recorded Wind Gust:

63 mph at Folly Beach South End



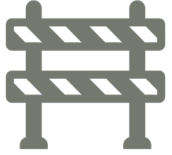
Storm Surge

1.0 to 1.5 feet; no noteworthy storm surge flooding occurred

Debby Impacts Overview



Peak Power Outages: 5489 customers



Road Closures: 150



Regulated Dams Breached or Failed: 0



Damaged Structures: 460



Rescues: 5



Evacuations: 50 people, 84 pets



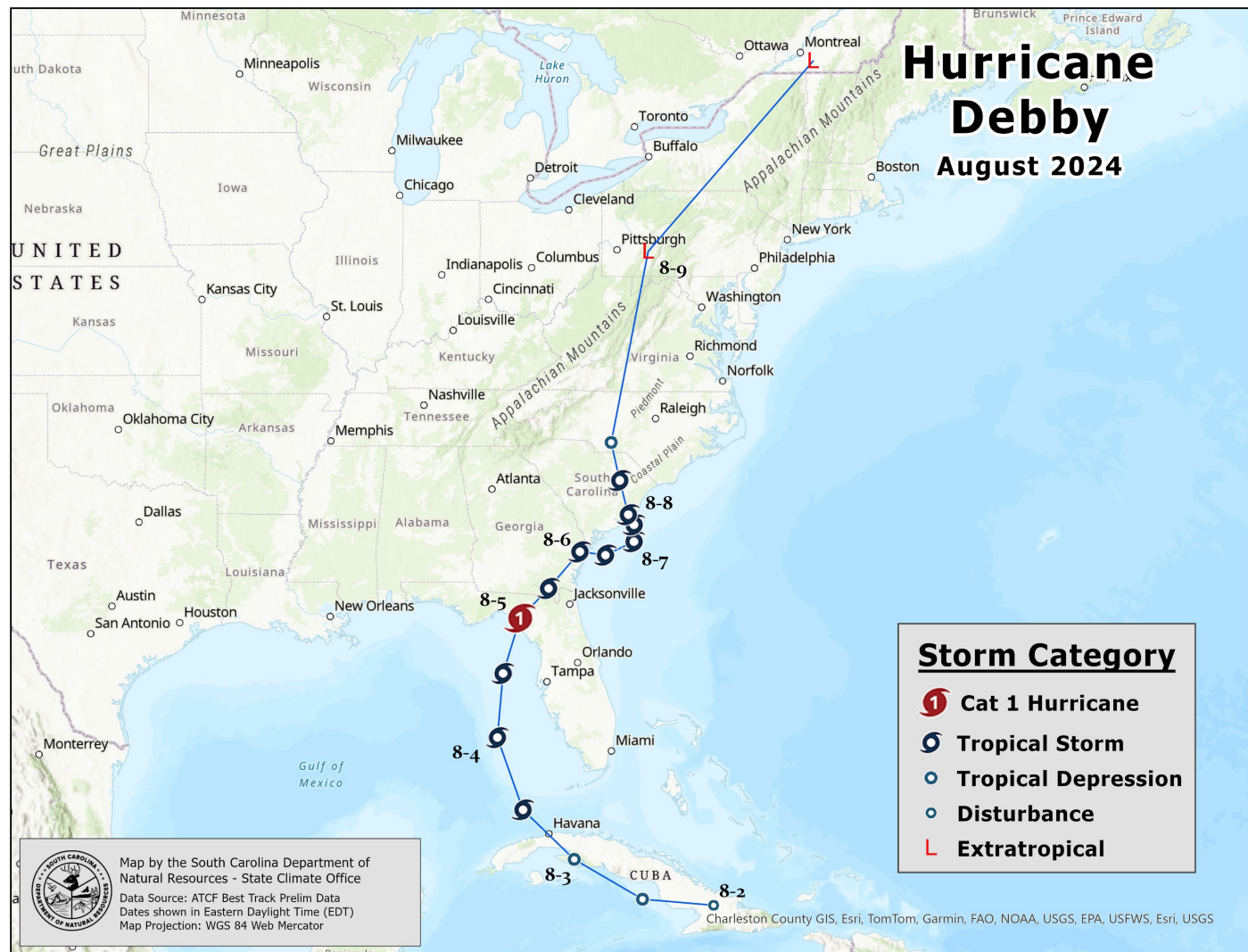
Shelters Opened: 22

Peak Occupancy: 142 people

Debby Track Map

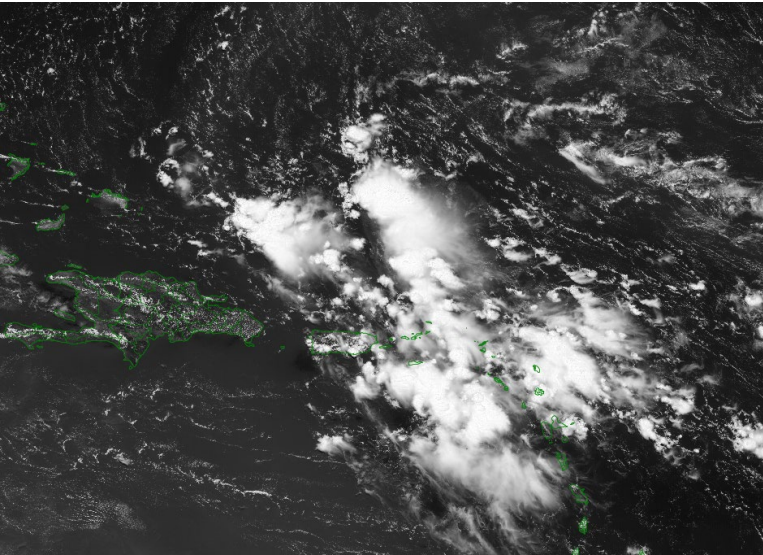
The first advisory issued by the National Hurricane Center on this feature came at 11 a.m. EDT on August 2 for Potential Tropical Cyclone Four. It became a tropical cyclone as Tropical Depression Four later that day. It strengthened into a tropical storm and received the name Debby on August 3. Debby slowly and steadily intensified while moving over the simmering waters of the eastern Gulf of Mexico through the early morning of August 5, becoming a hurricane just before making landfall near Steinhatchee, Florida around 7 a.m. that day.

It slowed while tracking over Florida and Georgia before wandering over the Atlantic Ocean on August 6. It spent around 36 hours over the Atlantic before making its second landfall near Bulls Bay in South Carolina around 2 a.m. on August 8. Debby then accelerated northward, exiting South Carolina that afternoon as it weakened. It became a tropical depression that evening, then an extratropical storm on August 9 as it crossed the Appalachian Mountains, passing through Pennsylvania and New York.



Synoptic Summary

Debby began as a tropical wave that reached over the Atlantic Ocean from West Africa around July 22, 2024. It drifted westward over the following days through the tropical Atlantic. A swirl of clouds associated with this wave caught the attention of forecasters at the National Hurricane Center (NHC) once it reached around 40° west longitude on July 26. At the time, they indicated a 20 percent chance for it to become a tropical cyclone within seven days.



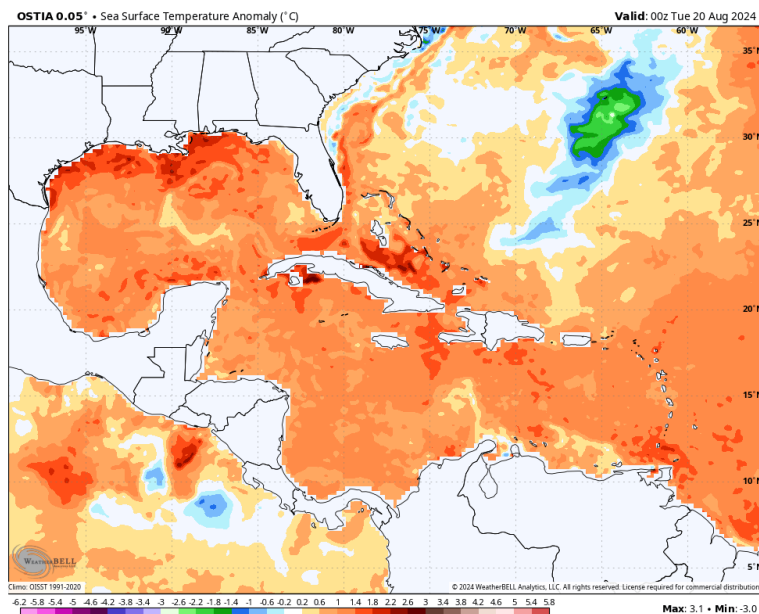
This visible satellite image from 12:50 p.m. EDT on July 31, 2024, shows a cluster of thunderstorms around the Leeward Islands and Puerto Rico that would eventually become Debby.

Image Source: SLIDER by RAMMB

By that evening, thunderstorms had become widespread and organized enough to classify this feature as Tropical Depression Four, centered near Cayo Cinco Blas, Cuba. Waters were warmer than average for the date around Cuba, and vertical shear was low. However, intensification was expected to be slow due to interaction with land and dry air around the system. It took 36 hours for the depression to reach tropical storm strength and gain the name Debby at 5 p.m. EDT on August 3. It then passed over waters much warmer than usual (generally 86-90°F) for the date over the eastern Gulf of Mexico. It also entered a more humid air mass, so intensification was steady. It became a hurricane at 11 p.m. EDT the following day, hours before making landfall near Steinhatchee, Florida, around 7 a.m. EDT on August 5. Maximum sustained winds in Debby were 80 mph at the time.

Thunderstorm activity was sparse around the tropical wave until it reached the Lesser Antilles on July 29. Thunderstorms became more widespread after that, but development was slow. The wave was embedded in a dry air mass, so the increase in thunderstorm coverage was gradual, and it took days for a surface circulation to form.

By the time the tropical wave reached eastern Cuba on August 2, NHC forecasters had enough confidence in development and significant impacts that they designated the slowly developing system as Potential Tropical Cyclone Four. The first advisory they issued at 11 a.m. that day indicated that Debby would become a tropical storm before crossing Florida, then pass just off the South Carolina coast.

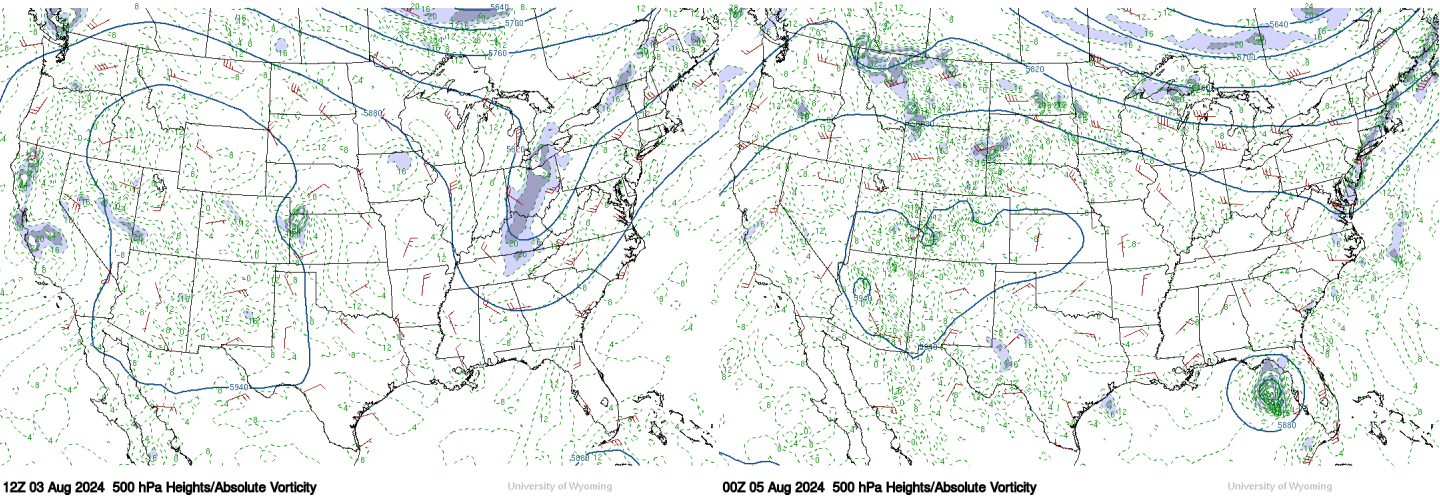


This plot of sea surface temperature anomalies from August 1, 2024, across the Atlantic Basin shows warmer-than-average waters for the date across the areas in the Caribbean Sea, southwestern Atlantic and eastern Gulf of Mexico.

Image Source: WeatherBELL

Synoptic Summary

An upper-level trough over the Midwestern states and the lower Mississippi Valley caused Debby's northward turn over the Gulf of Mexico. As it settled into the eastern United States in early August, the trough supported a cold front crossing the eastern United States. The front became stationary over South Carolina during August 3-4 before it dissipated. The front and upper trough generated widespread diurnal thunderstorms across South Carolina with locally heavy rainfall. Much of the state saw over an inch of rain, and this predecessor rain event brought heavy rainfall of 3-5 inches to parts of Richland, Greenville, Spartanburg, Florence, and Darlington Counties.



Upper-air analyses at 500 hPa from 8 a.m. EDT August 3 (left) and 8 p.m. August 4 (right) show the upper trough that sent a front into the southeastern United States with locally heavy rainfall those days; the trough also steered Debby northward over the Gulf of Mexico. The trough can be seen weakening and lifting northward on the August 4 map, which left Debby with weak steering currents for days after it made landfall in Florida. A disturbance over Montana evident on the August 4 map would pass too far north to pull Debby out of South Carolina and it would be August 8 before a stronger trough would form over the Great Lakes region to eject Debby from the region.

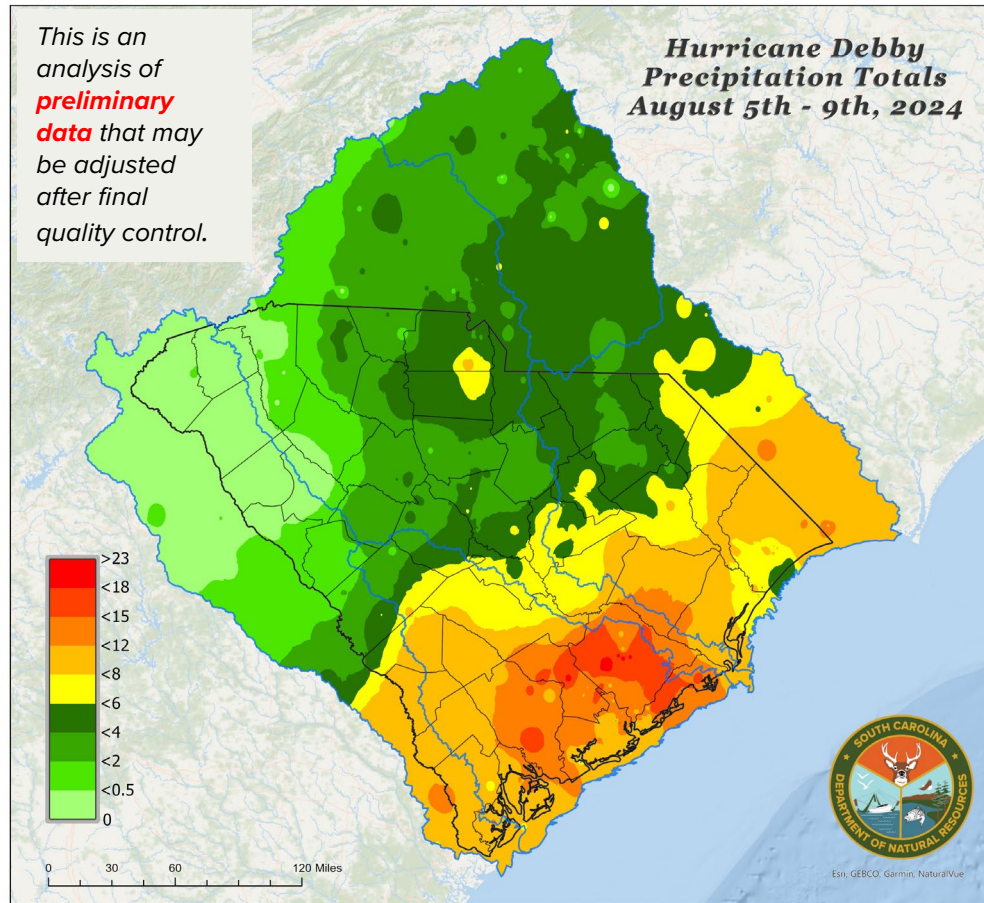
Image Source: University of Wyoming Weather Web

The upper-level trough weakened and retreated northward starting on August 5. This left Debby with weak steering currents, resulting in the storm slowing to a crawl and wandering near the Georgia and South Carolina coastlines through August 9. Debby's slow drift through northern Florida and southern Georgia weakened it to a minimal tropical storm with 40 mph maximum sustained winds when the center emerged over the Atlantic Ocean at midday on August 6. By this time, the storm was so disrupted that reorganization and significant intensification over the waters off the South Carolina coast was unlikely. Debby's center was over water for about 36 hours before it made its second landfall around 2 a.m. on August 8. Despite passing over waters about 2°F warmer than average for the date, it only strengthened to a 60-mph tropical storm upon reaching the South Carolina coast near Bulls Bay. Debby then accelerated northward, and its center exited South Carolina around 2 p.m. on August 8. However, heavy lingered across the state's Coastal Plain through that night and past daybreak near the Grand Strand on August 9.

Another cold front followed Debby into South Carolina, which produced thunderstorms that dropped additional heavy rainfall later August 9 into August 10. The heavy rain from these thunderstorms exacerbated the ongoing flash flooding and river flooding from Debby's deluge; some areas saw new or renewed flooding. Rainfall for August 9-10 was over an inch over much of South Carolina, as parts of Horry, Cherokee, Greenville, and Marion Counties received 3-5 inches.

Rainfall Totals

Debby's slow drift through South Carolina and vicinity resulted in a historic heavy rainfall and flooding event over parts of the state. Rainfall totals were comparable to other recent extreme rainfall events caused by Hurricanes Matthew in 2016 and Florence in 2018, along with the flood event of early October 2015. While the rainfall was heaviest along the Coastal Plain, and this is where the most widespread flash flooding and river flooding occurred, flooding rainfall also occurred in parts of York, Chester, and Lancaster Counties.



Select Rainfall Totals in South Carolina From Tropical Storm Debby (August 5 – 9, 2024)

Station Name	County	Provider	5-Day Rainfall Totals	Annual Exceedance Probability (%) 4-Day Event	Annual Exceedance Probability (%) 7-Day Event
Moncks Corner 6.6 SW	Berkeley	CoCoRaHS	22.02	0.1	0.1
Ridgeville 3.2 WSW	Dorchester	CoCoRaHS	18.86	0.1	0.1
Mount Pleasant 8.1 NE	Charleston	CoCoRaHS	18.47	0.1	0.2
Green Pond 1.3 S	Colleton	CoCoRaHS	17.57	0.1	0.2
Beaufort 5.7 NE	Beaufort	CoCoRaHS	14.30	0.2	0.5
Andrews	Georgetown	NWS	13.10	0.2	0.5
Hardeeville 6.7 ENE	Jasper	CoCoRaHS	12.45 (M)	1	2
Longs 1.3 NW	Horry	CoCoRaHS	12.35	1	2
Kingstree 7.9 NW	Williamsburg	CoCoRaHS	11.85	1	2
Holly Hill 1 SW	Orangeburg	NWS	11.84	1	2
Mullins	Marion	NWS	11.51	1	2
Hampton 0.8 SW	Hampton	CoCoRaHS	11.32	1	2

Rainfall Total with (M) denotes the totals with missing data.

Annual Exceedance Probability (AEP): Percent chance that an event will happen in any given year. Based on data from [NOAA Atlas 14](#). This event spanned 5-Days and NOAA Atlas 14 only provides AEP values for 4- and 7-Day Events, which are the closest to these event totals.

Rainfall Totals

Debby's peak rainfall in South Carolina of 22.02" inches near Moncks Corner ranks second among rainfall from tropical cyclones in South Carolina's history. Rainfall from the October 2015 rainfall and flooding event, while enhanced by proximity of Hurricane Joaquin, is not considered to be solely caused by a tropical cyclone. Therefore, this event is not included in the historical records for South Carolina's tropical cyclone rainfall events. For comparison, the peak rainfall from the October 1-5, 2015, event was 27.19 inches near Mount Pleasant.

Highest Rainfall Totals in South Carolina From Tropical Cyclones and their Remnants (1956 – 2024)

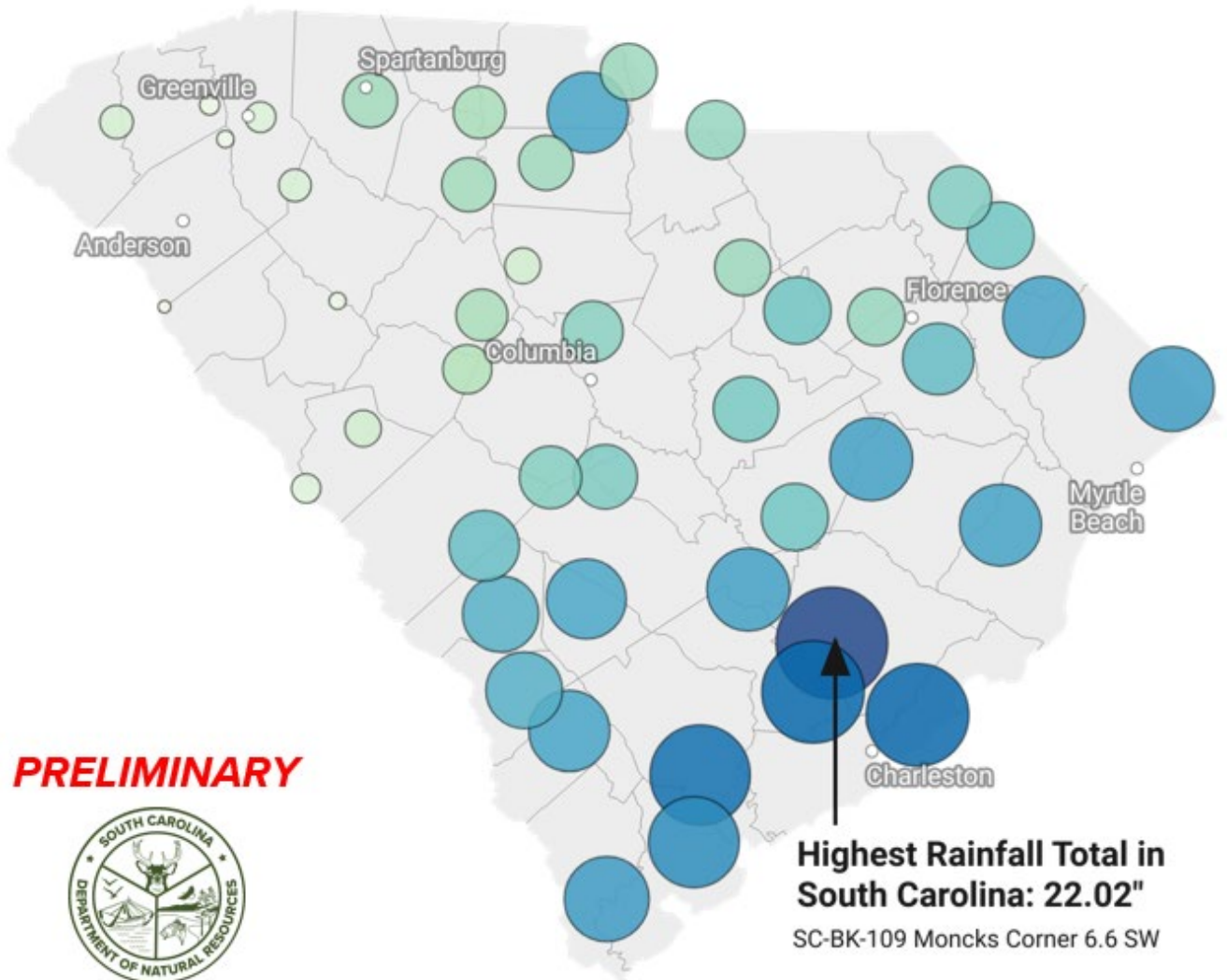
Rainfall Total	Tropical Cyclone	Dates	Location
23.68"	Florence	Sep 15 – 18, 2018	Loris 2.9 WSW
22.02"	Debby	Aug 5 – 9, 2024	Moncks Corner 6.6 SW
17.45"	Beryl	Aug 13 – 18, 1994	Jocassee 8 NW
16.92"	Matthew	Oct 7 – 8, 2016	Edisto Island Middleton
16.80"	Floyd	Sep 15 – 16, 1999	Myrtle Beach
15.21"	Dorian	Sep 5 – 6, 2019	Pawleys Island 5.6 NNE
15.13"	Jerry	Aug 23 – 28, 1995	Hilton Head
14.17"	Hermine	Sep 1 – 3, 2016	Georgetown 6.0 S
14.11"	TD #8	Aug 15 – 18, 1971	Sullivans Island
13.96"	Marco/Klaus	Oct 10 – 13, 1990	Pageland
13.80"	Gladys	Oct 17 – 20, 1968	Marion

Stations operated by the National Weather Service or **CoCoRaHS**

*All data is considered **PRELIMINARY**, and rainfall totals may be adjusted after final quality control has been completed.*

Tropical Storm Debby (August 5 - 9, 2024)

Highest Rainfall Totals Per County



PRELIMINARY Data from CoCoRaHS and National Weather Service networks

Created with Datawrapper

*All data is considered **PRELIMINARY**, and rainfall totals may be adjusted after final quality control has been completed.*

Rainfall Totals

Highest Rainfall Totals Per County in South Carolina From Tropical Storm Debby (August 5 – 9, 2024)

County	Rainfall Total	Station	County	Rainfall Total	Station
Abbeville	0.14" (M)	Due West 0.6 NE	Greenwood	0.32"	Greenwood 8 NE
Aiken	8.41"	Williston 4.3 NNW	Hampton	11.32"	Hampton 0.8 SW
Allendale	10.03"	Allendale 1.7 SE	Horry	12.35"	Longs 1.3 NW
Anderson	0.38"	Belton 7 NNE	Jasper	12.45" (M)	Hardeeville 6.7 ENE
Bamberg	10.96"	Bamberg	Kershaw	5.18"	Cassatt 0.1 NE
Barnwell	9.91"	Barnwell 1.2 WSW	Lancaster	5.24"	Fort Mill 3.3 E
Beaufort	14.30"	Beaufort 5.7 NW	Laurens	1.53"	Fountain Inn 4.6 S
Berkeley	22.02"	Moncks Corner 6.6 SW	Lee	7.62"	Bishopville 1.4 ENE
Calhoun	7.22"	Elloree 4.5 W	Lexington	6.45"	Swansea 6.1 SW
Charleston	18.47"	Mount Pleasant 8.1 NE	McCormick	1.21" (M)	Clarks Hill 2.5 SE
Cherokee	4.40"	Lockhart 5.4 N	Marion	11.51"	Mullins
Chester	5.80"	Chester 6.4 NE	Marlboro	6.62"	Clio 1.6 WNW
Chesterfield	5.65"	Pageland 9.0 WNW	Newberry	4.33"	Prosperity 4.0 E
Clarendon	7.81"	Summerton 7.6 ESE	Oconee	1.63"	Keowee Key 0.9 SW
Colleton	17.57"	Green Pond 1.3 S	Orangeburg	11.84"	Holly Hill 1 SW
Darlington	5.39"	Darlington 7.3 SSW	Pickens	0.48"	Easley 4.8 NNE
Dillon	7.57"	Dillon 3.8 NW	Richland	6.13"	Blythewood 5.0 W
Dorchester	18.86"	Ridgeville 3.2 WSW	Saluda	3.85"	Leesville 8.0 N
Edgefield	1.98"	Edgefield 3.3 N	Spartanburg	4.85"	Spartanburg 3 SSE
Fairfield	3.44"	Parr	Sumter	7.14" (M)	Sumter 3.3 SW
Florence	8.67" (M)	Effingham 5.3 E	Union	4.75"	Santuck
Georgetown	13.10"	Andrews	Williamsburg	11.85"	Kingstree 7.9 NW
Greenville	1.35"	Greenville Downtown Airport	York	11.30"	Rock Hill 4.8 SSW
Rainfall Total with (M) denotes totals with missing data					

Stations operated by the National Weather Service or **CoCoRaHS**

Rain and Flash Flooding Impacts

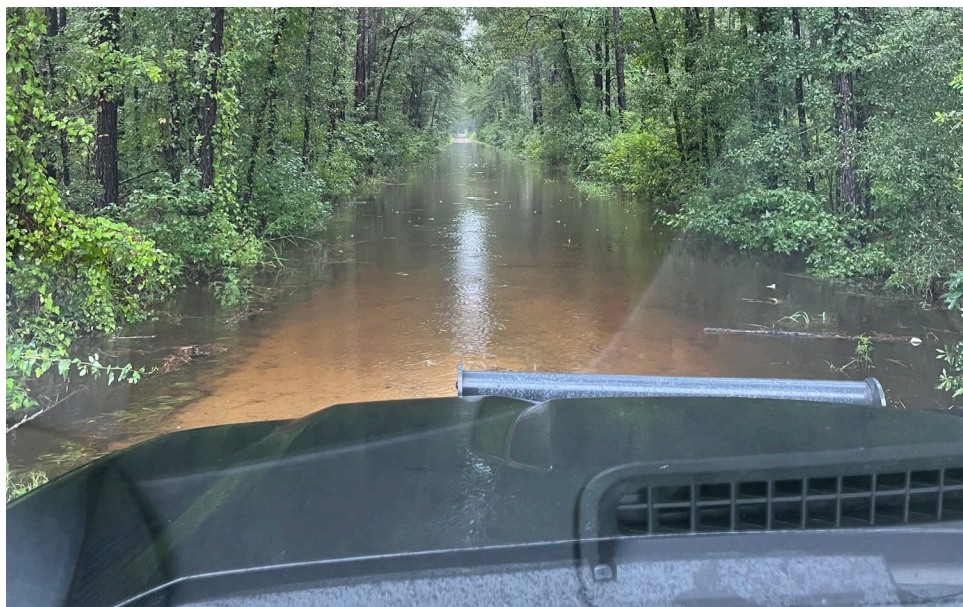


Motorists became stuck on I-26 near Ridgeville on August 8 because of flash flooding.

Photo Credit: SCDOT Photo

Heavy rain in the Lowcountry led to widespread flash flooding and numerous road closures. One example was along I-26 at mile marker 189 near Ridgeville. The interstate had to be closed in this area at around 8 a.m. on August 8 as it became impassible due to flooding. The flood waters damaged the eastbound lanes, resulted in them remaining closed for a few days while they were repaired. The detour around the closure resulted in delays of up to an hour some commuters relying on the interstate. One eastbound lane and the westbound lanes reopened on August 9 after waters receded and the other lane reopened on the morning of August 10 after the repairs were completed.

Flash flooding initially prevented technicians from reaching a radio repeater facility in Jasper County on August 6. With help from SCDNR law enforcement vehicles, the technician was able to reach and perform maintenance on the equipment.



Flooding slowed access to a radio repeater in Colleton County.

Photo Credit: Ruben Carter, Colleton County Sheriff's Office

Rain and Flash Flooding Impacts



Flash flooding on August 6 along U. S. Highway 17 near Seewee Road in Awendaw led to the closure of the road for a time and detours around the flooding.

Photo Credit: Charleston County Sheriff's Office

Flash flooding also occurred on Guerins Bridge Road in Awendaw, leaving it impassible on August 6.

Photo Credit: Charleston County Sheriff's Office



Flash flooding closed the eastbound lanes of Dave Lyle Boulevard near Chamberside Drive on the morning of August 8.

Photo Credit: Rock Hill Police Department

Rain and Flash Flooding Impacts



This sinkhole to form on Romney Street in Charleston on August 7. The cause was a burst pipe; it's unclear if rainfall from Debby caused the pipe to burst.

Photo Credit: Charleston Police Department

Flooding in Edisto Beach on August 6

Photo Credit: Ruben Carter, Colleton County Sheriff's Office



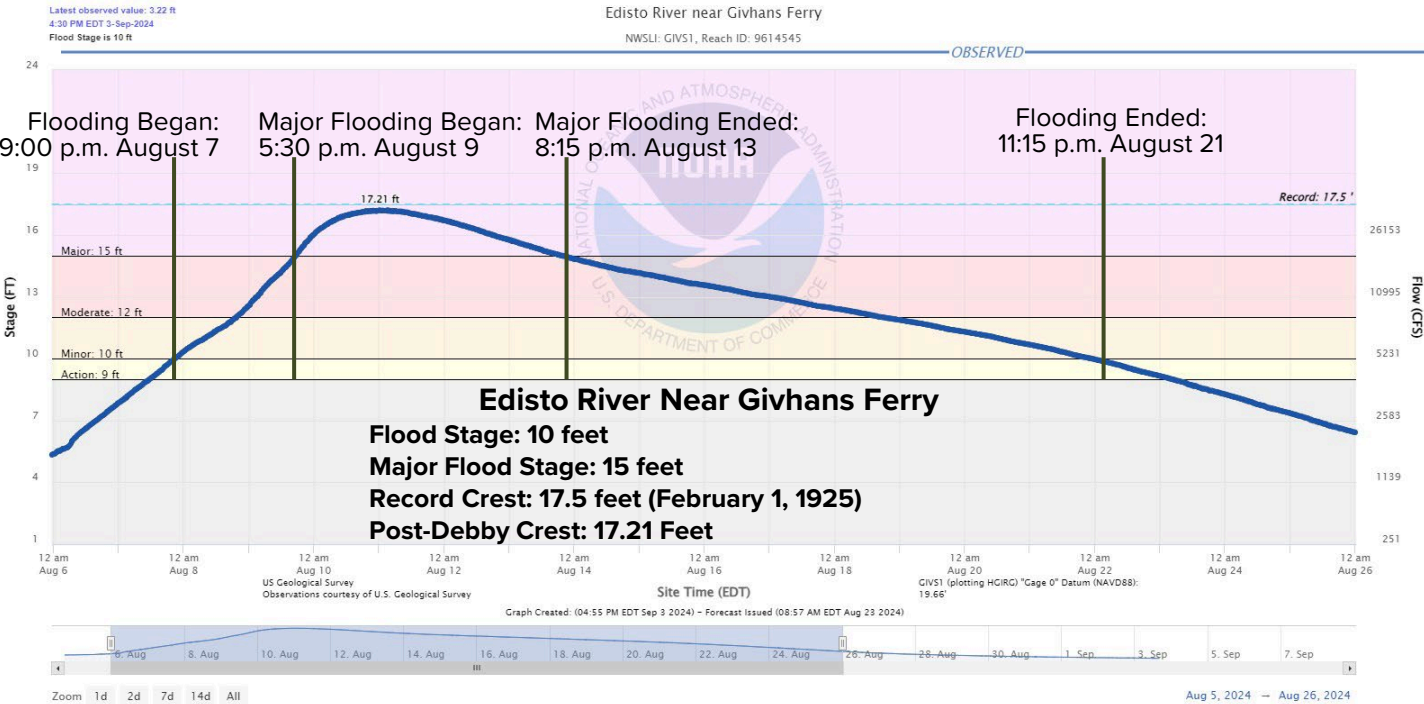
McGrady's Pond in Colleton County overflows its banks after Debby's rain.

Photo Credit: Scott O'Quinn, Colleton County Fire and Rescue

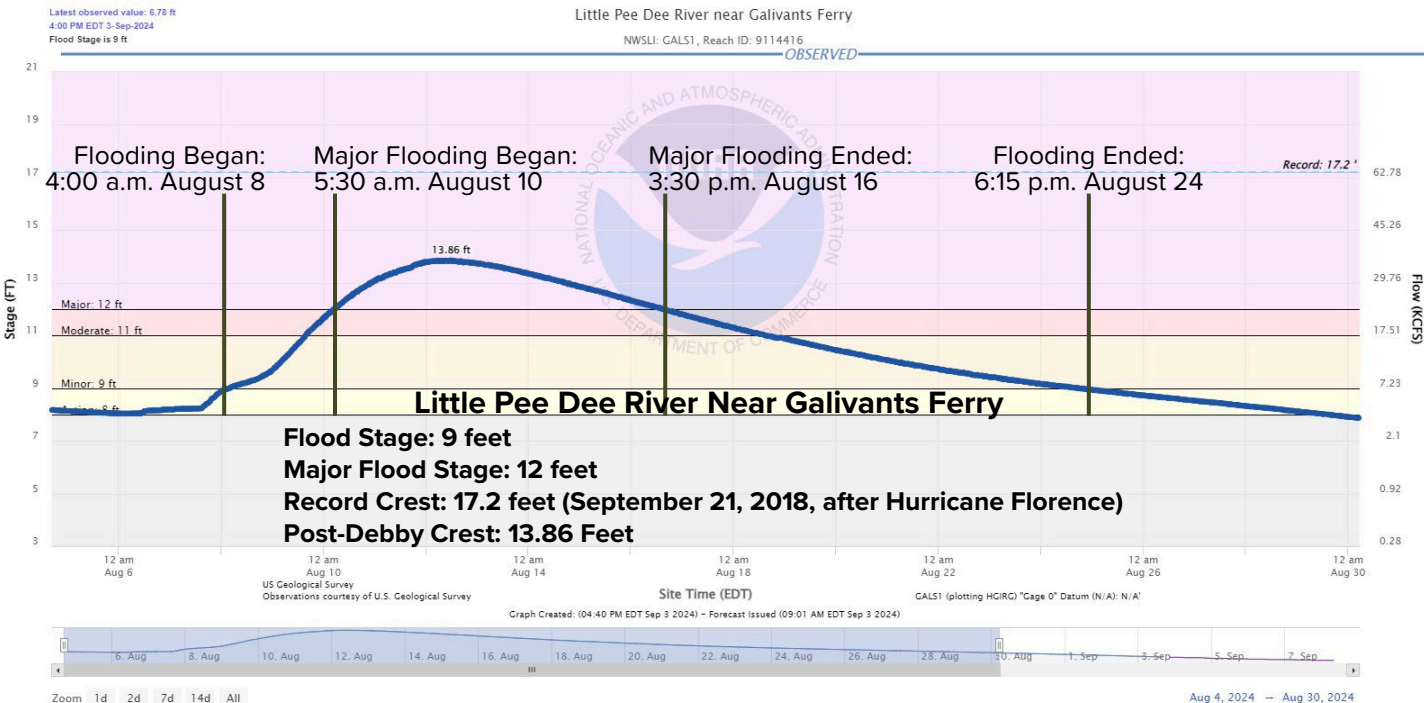
River Flooding

The extreme rainfall from Debby led to moderate to major river flooding along several rivers in South Carolina.

The Edisto River near Givhans Ferry crested at just below its record crest.

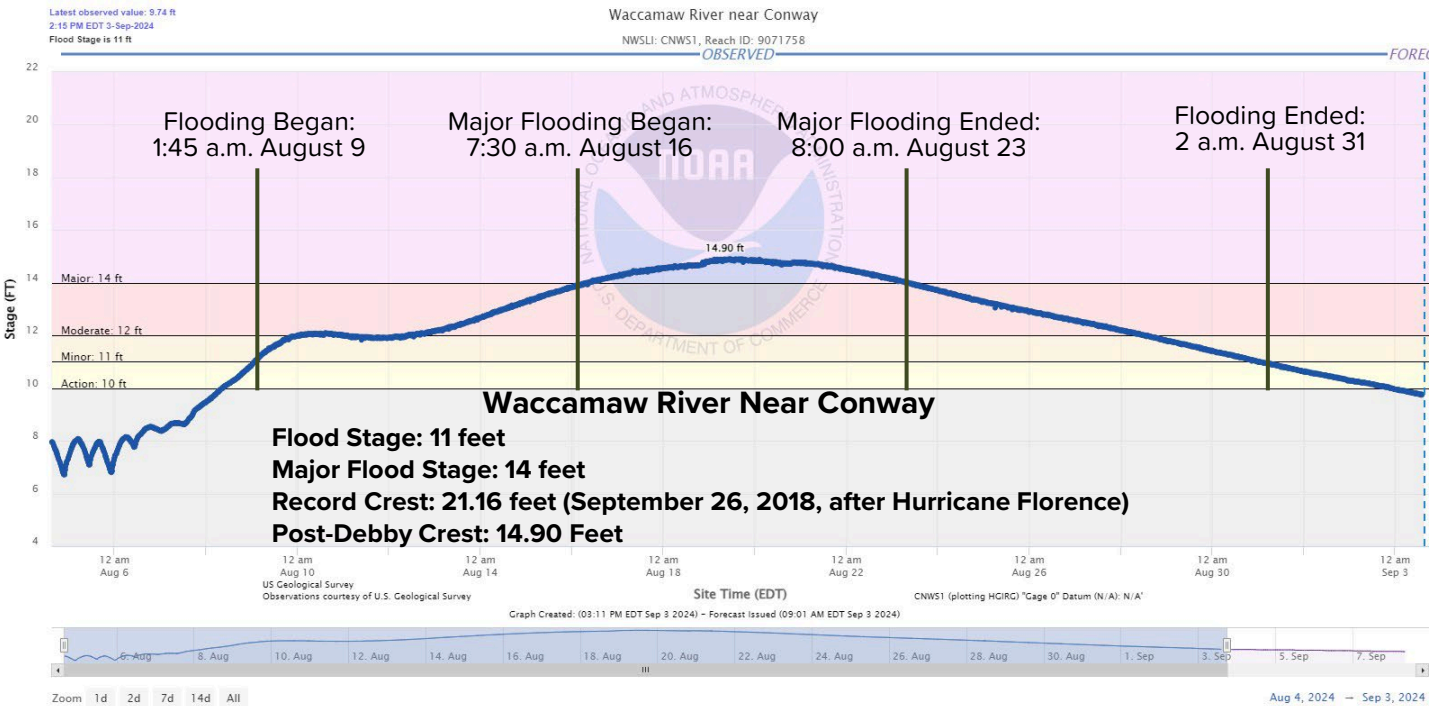


The Little Pee Dee River, which had shrunk to a trickle in July 2024 after months of drought, was above major flood stage for days in the wake of Debby.

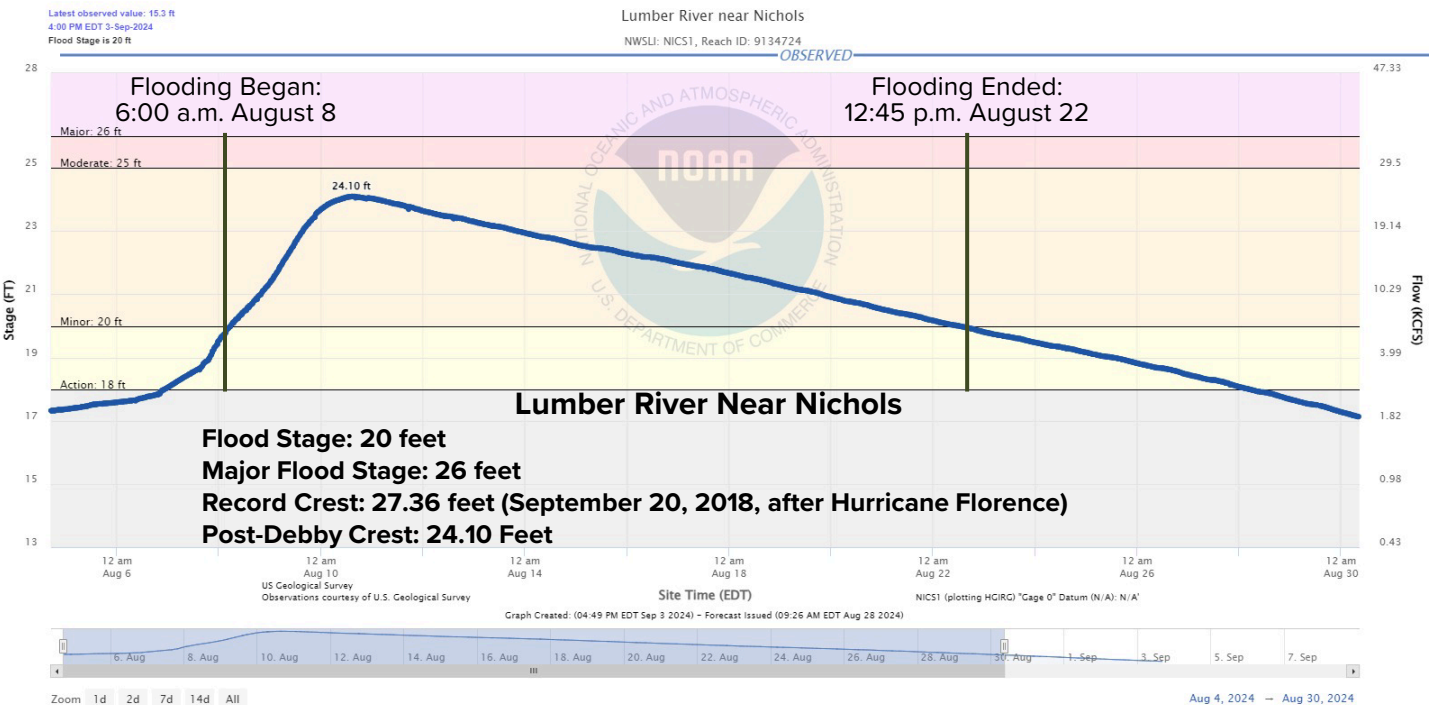


River Flooding

Flooding began along the Waccamaw River near Conway on August 9 and remained in flood until the early morning hours of August 31. The river was above major flood stage for about seven full days, and the flooding had significant impacts on area residents.

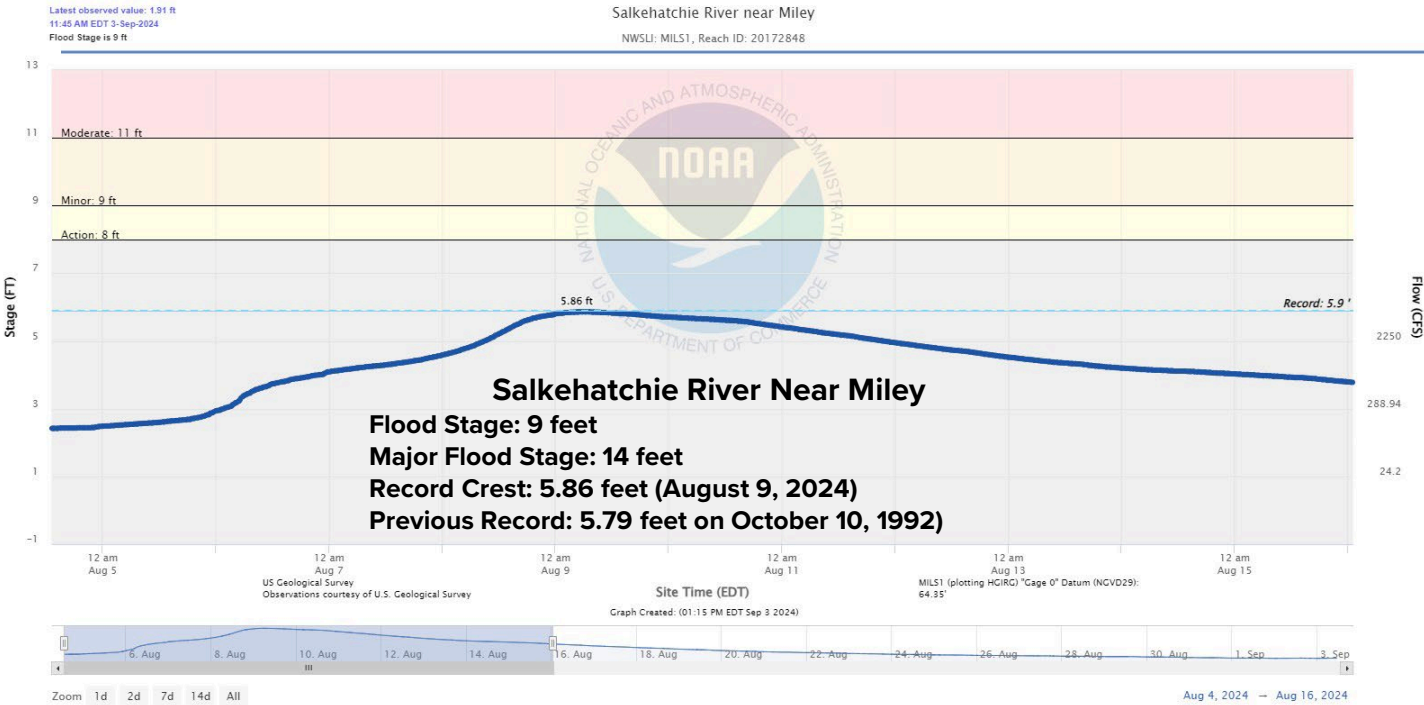


Flooding along the Lumber River in the Nichols area was not as bad as initially feared, as rainfall was not as extreme as forecast in the river's watershed in North Carolina. However, the crest after Debby was the third highest on record, and widespread flooding occurred in the Town of Nichols for the sixth time in the last ten years.

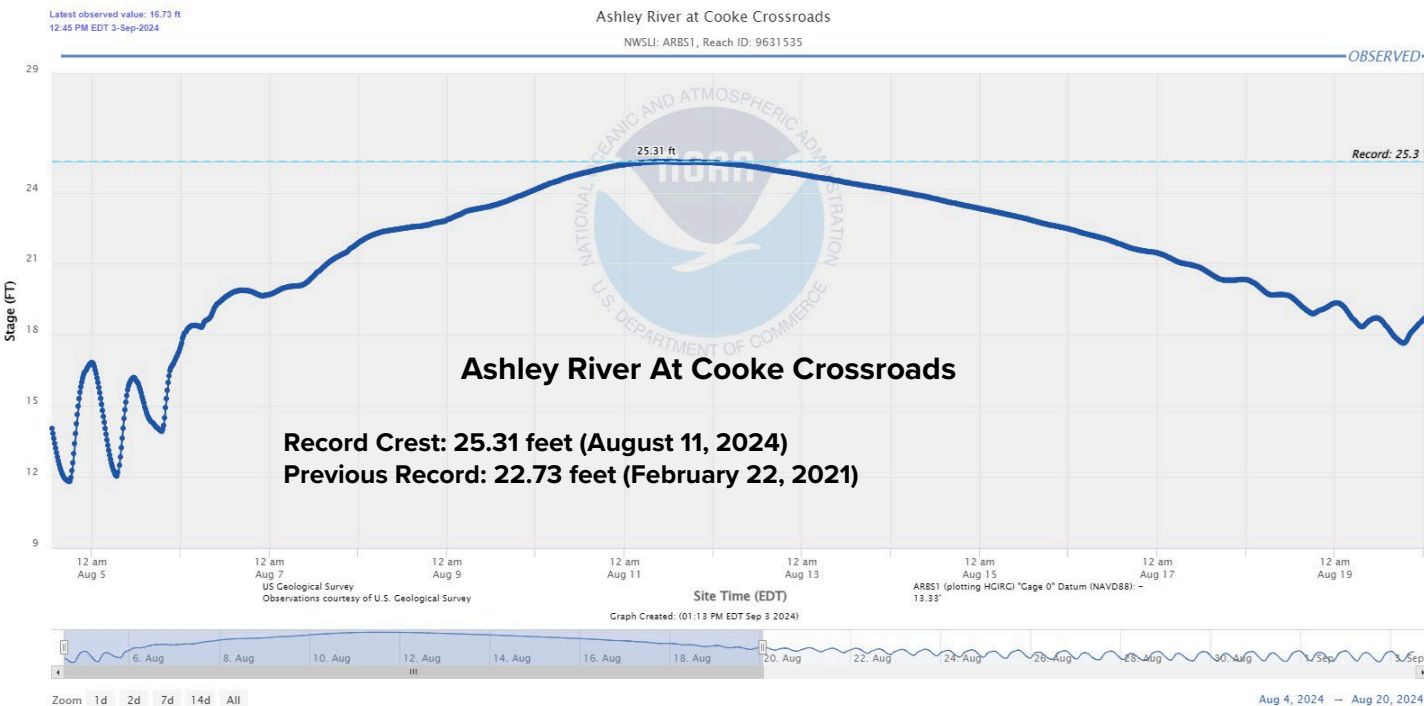


River Flooding

The Salkehatchie River saw a record crest at the gauge near Miley, but this river has not reached its 9-foot flood stage during its entire period of record dating back to 1985.



The Ashley River gauges at Cooke Crossroads has no defined flood stages. Observations began at this gauge on September 30, 1994.

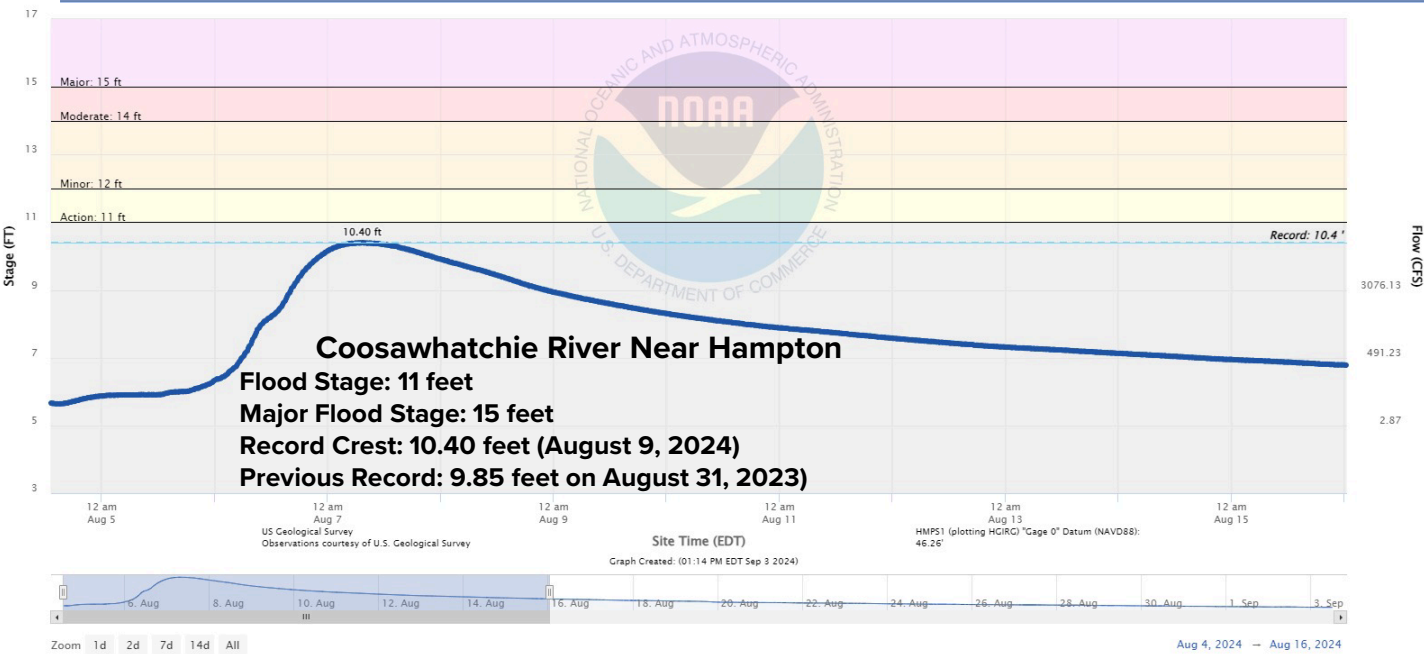


River Flooding

The Coosawhatchie River saw a record crest at the gauge near Hampton, but this river has not reached its 11-foot flood stage during its entire period of record dating back to 1990.

Latest observed value: 5.38 ft
12:15 PM EDT 3-Sep-2024
Flood Stage is 12 ft

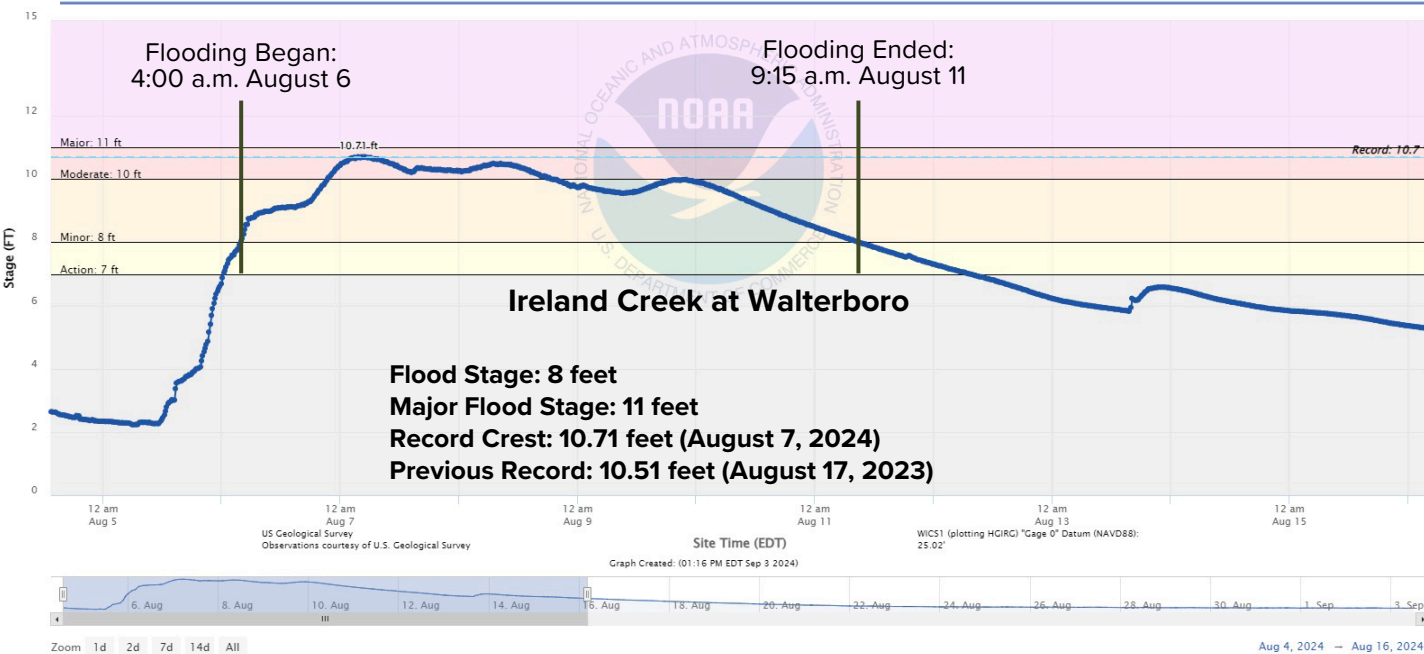
Coosawhatchie River near Hampton
NWSLI: HMP51, Reach ID: 20152151



Ireland Creek reached a record crest at the Walterboro gauge after Debby. It was above flood stage for about five days, but was just short of the threshold for major flooding at this location.

Latest observed value: 2.56 ft
12:30 PM EDT 3-Sep-2024
Flood Stage is 8 ft

Ireland Creek at Walterboro
NWSLI: WICS1, Reach ID:



River Flooding Comparisons

Rainfall from Debby was comparable to the other three extreme rainfall and flooding events that have occurred in South Carolina since 2015. In a few cases, river gauges recorded a record-high crest in the wake of Debby's rainfall, though in one case, the gauge has a short period of record. Below is a chart comparing the peak stage from Debby at select river gauges across South Carolina to the peak stage from other recent historical flooding events.

River Gauge	Peak Post-Debby Stage	Peak Post-Florence 2018 Stage ¹	Peak Post-Matthew 2016 Stage ²	Peak 2015 Stage ³	Record Highest Stage (year)
Edisto River near Givhans Ferry	17.21	5.58	14.90	16.06	17.50 (1925)
Congaree River at Columbia	13.24	14.85	4.72	31.81	39.80 (1908)
Waccamaw River at Longs	14.66	20.19	16.95	15.17	20.19 (2018)
Waccamaw River near Conway	14.90	21.16	17.89	16.23	21.16 (2018)
Little Pee Dee River at Galivants Ferry	13.86	17.21	17.10 ⁶	9.21	17.21 (2018)
Pee Dee River at Pee Dee	24.90	31.83	23.14	22.81	33.30 (1945)
Pee Dee River at Highway 701	19.60	25.00	22.61 ⁶	18.25	25.00 (2018)
Lynches River above Bishopville	16.07	18.22	13.68	14.59	22.35 (1945)
Lynches River near Effingham	15.74	16.66	17.76	19.70	21.21 (1945)
Black River at Kingstree	12.44	10.40	16.40	22.65	22.65 (2015)
Coosawhatchie River near Hampton	10.40	5.77	9.61	6.50	10.40 (2024)
Ireland Creek at Walterboro ⁴	10.71	N/A	N/A	N/A	10.71 (2024)
Ashley River at Cooke Crossroads ⁵	25.31	N/A	N/A	N/A	25.31 (2024)
Salkehatchie River near Miley	5.86	3.82	5.12	5.28	5.86 (2024)
Record crests for historical events in bold font					

¹ Hurricane Florence impacted South Carolina on September 14, 2018.

² Hurricane Matthew impacted South Carolina on October 8, 2016.

³ The 2015 extreme rainfall and flooding event occurred October 1-5, 2015.

⁴ Streamflow and stage observations began for Ireland Creek at Walterboro on June 20, 2023, so no data are available for the South Carolina historical flooding events of the 2010s.

⁵ The Ashley River at Cooke Crossroads gauge has been intermittently available over the years and no data are available for the South Carolina historical flooding events of the 2010s.

⁶ The peak post-Matthew crest for the Little Pee Dee River at Galivants Ferry and at the Pee Dee River at Highway 701 were record crests at the time, but new record crests occurred after Hurricane Florence in 2018. The post-Matthew crests remain second-highest on record for these gauges as of September 2024.

All Debby data is preliminary and subject to quality control review. Quality controlled data for Debby may not be available for months.

Data for the three earlier events are finalized, quality-controlled data from USGS. The values may differ from figures given in official SC State Climatology Office reports from these events because the reports may still contain preliminary data available at the time the report was issued.

River Flooding Impacts



This photo of the Gator Walk Road area of Dorchester County from the morning of August 8 shows the extent of flooding at the time along this part of the Edisto River.

Photo Credit: SCDNR / John P. Jones



This photo of the Little Pee Dee River shows flooded homes in Marion County.

Photo Credit: SCDNR / Maria Cox Lamm

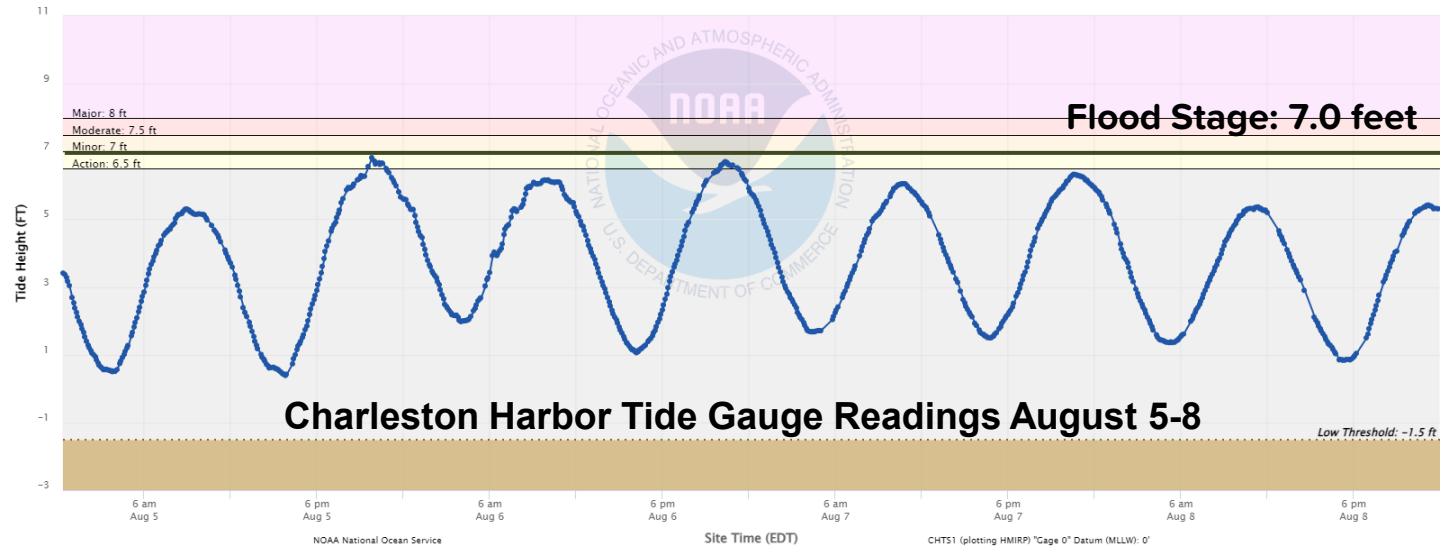
Storm Surge

It was unusual that Debby caused only a small surge along the South Carolina coastline. It is typical for a storm of Debby's strength to cause a 2-4 foot storm surge when passing near or making landfall along a coastal area. However, the storm surge from Debby was only 1.0-1.5 feet. Despite a new moon on August 4, no significant coastal flooding from storm surge occurred along South Carolina's coast. This was welcomed because of the severe flooding from Debby's heavy rain, especially by residents of Charleston County, who are particularly vulnerable to coastal flooding from any cause.

Latest observed value: 5.92 ft
2:42 PM EDT 14-Aug-2024
Flood Stage is 7 ft

Charleston Harbor Tide Gauge (IN MLLW)

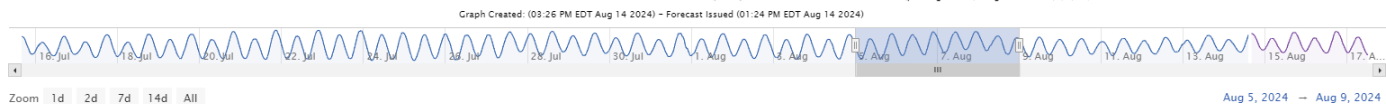
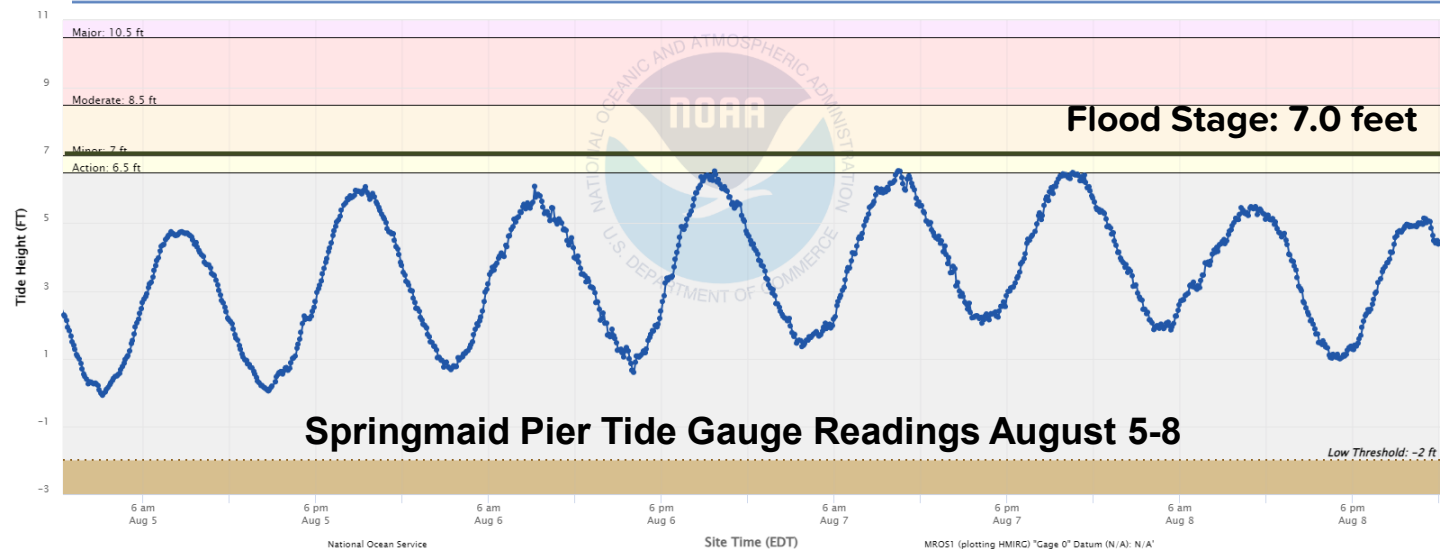
NWSLI: CHTS1, Reach ID:



Latest observed value: 5.77 ft
2:48 PM EDT 14-Aug-2024
Flood Stage is 7 ft

Atlantic Coast at Myrtle Beach Springmaid Pier (IN MLLW)

NWSLI: MROS1, Reach ID:



Peak Wind Gusts

Damaging winds from Debby were much less impactful than the heavy rainfall and flooding. However, there were sporadic reports of wind damage in South Carolina. This was primarily in the form of tree and power line damage. This occurred in several locations along the coast, but some inland areas saw minor wind damage as well. The risk of wind damage was increased by the soil becoming saturated, making it possible for trees to be downed by weaker winds. This was significant in York and Chester Counties on August 8, where there were several instances of tree and power line damage despite highest wind speeds only in the 40-50 mph range. The wind damage was noted just across the state line in North Carolina as well, with Charlotte Douglas International Airport reporting a peak wind gust of 47 mph as Debby moved through.

Peak Wind Gusts From Debby August 5-8

Station	Provider	County	Gust (mph)
Folly Beach South End	WeatherFlow	Charleston	63
Battery Point Charleston	WeatherFlow	Charleston	59
Isle of Palms Pier	WeatherFlow	Charleston	56
Beaufort – Seaside Road	WeatherFlow	Beaufort	55
Charleston International Airport	NOAA	Charleston	52
Botany Bay	SCDNR	Charleston	50
Beaufort – Ribault Road	WeatherSTEM	Beaufort	49
Springmaid Pier	NOAA	Horry	49
Charleston Tide Gauge	NOAA	Charleston	48
Beaufort MCAS	NOAA	Beaufort	48
Sullivan’s Island	WeatherFlow	Charleston	46
Hilton Head Island	NOAA	Beaufort	44
Bennettsville – Marlboro County Jetport	NOAA	Marlboro	44
Rock Hill – York County Airport	NOAA	York	43
Carolina Sandhills NWR	WeatherFlow	Chesterfield	42
Chester – Catawba Regional Airport	NOAA	Chester	38

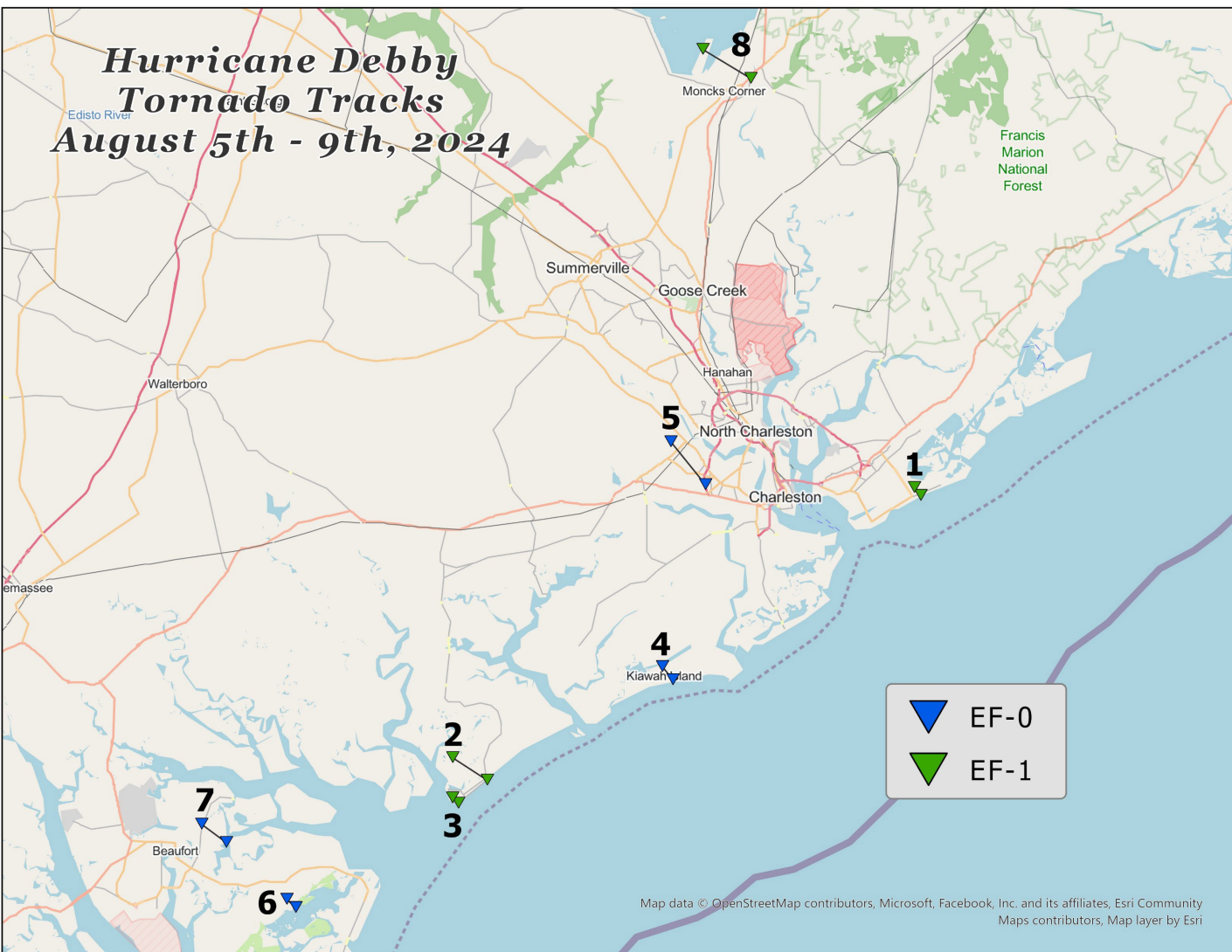
Peak Gusts from SC Marine Stations

Shutes Folly	WeatherFlow	Charleston	51
Buoy 41004 (40 nm SE Sullivan’s Island)	NOAA	Int’l Waters	49
Fripp Nearshore Buoy (3.8 nm SE Fripp Island)	NOAA	Colleton	49
Fort Sumter	WeatherFlow	Charleston	47
Murrells Inlet	WeatherFlow	Horry	47

Tornadoes

Debby spawned eight tornadoes in South Carolina, all in the Lowcountry. The National Weather Service rated four of them EF-1 and four of them EF-0. The tornadoes occurred during the late evening of August 5 and early morning of August 6. Though the tornadoes all occurred during times when most people are sleeping, there were no casualties reported.

1. Isle of Palms, rated EF-1
2. Edisto Beach (North), rated EF-1
3. Edisto Beach (South), rated EF-1
4. Kiawah Island, rated EF-0
5. Charleston West Ashley, rated EF-0
6. St. Helena Island, rated EF-0
7. Ladys Island, rated EF-0
8. Moncks Corner, rated EF-1



Tornado tracks are approximate. Tornadoes rarely follow straight paths; they usually move in an arc and often rapidly shift to the left or right.

Tornadoes

Tornado 1: Isle of Palms, Charleston County

Rating: EF-1

Start Time: 9:33 p.m. August 5

Duration: 4 minutes

Estimated Peak Wind: 87 mph

Path Length: 0.72 miles

Path Width: 75 yards

This tornado began as a waterspout over the Atlantic that came ashore near 25th Avenue. It tracked along 25th Avenue and northwestward across Waterway Boulevard before lifting over the Intracoastal Waterway. It caused considerable tree damage along its path, with many trees uprooted or snapped. There was also minor structural damage to several homes such as stripped shingles and stripped siding, along with the front door pulled off one home.



Tornado 2: Edisto Beach Area, Colleton and Charleston Counties

Rating: EF-1

Start Time: 9:35 a.m. Tuesday, August 6

Duration: 10 minutes

Estimated Peak Wind: 97 mph

Path Length: 2.89 miles

Greatest Path Width: 300 yards

This tornado was a waterspout over the Atlantic Ocean that moved ashore on Edisto Island near Coral Street. It moved northwestward across Palmetto Boulevard and Jungle Road, then Palmetto Road, Palmetto Pointe Lane and Cocktail Lane. The worst damage was to homes and trees along Fishing Creek Drive.



Tornadoes

Tornado 3: Second Edisto Beach Tornado, Colleton County

Rating: EF-1

Start Time: 10:08 p.m. August 5

Duration: 3 minutes

Estimated Peak Wind: 90 mph

Path Length: 0.56 miles

Path Width: 100 yards

This tornado began as a waterspout that came ashore near the intersection of Point Street and Laroche Street. It moved across Palmetto Boulevard, Myrtle Street, Lee Street, Neptune Street, and the southwest part of the Plantation Course at Edisto. The tornado caused damage to numerous trees and minor structural damage, including the demolition of a screened porch along Palmetto Boulevard.



Tornado 4: Kiawah Island, Charleston County

Rating: EF-0

Start Time: 10:55 p.m. August 5

Duration: 4 minutes

Estimated Peak Wind: 85 mph

Path Length: 1.18 miles

Greatest Path Width: 150 yards

This tornado began as a waterspout over the Atlantic Ocean and came ashore along Surfsong Road, then moved northwestward over Glen Abbey, Doral Open, Governors Drive before ending over marshland near Rhett's Bluff Road. The tornado caused no structural damage but caused some tree damage and left debris over the golf course along its path.



Tornadoes

Tornado 5: Charleston West Ashley, Charleston County

Rating: EF-0

Start Time: 12:14 a.m. August 6

Duration: 8 minutes

Estimated Peak Wind: 77 mph

Path Length: 3.88 miles

Path Width: 200 yards

This tornado began along I-526 near Citadel Mall and tracked northwestward over Bon Secours Hospital, Glenn McConnell Parkway, Mariners Ferry, and across the Hickory Hall Plantation neighborhood, ending near Muirfield Parkway. The tornado did not cause any structural damage, but caused several instances of tree damage, including some downed or snapped trees.



Tornado 6: St. Helena Island, Beaufort County

Rating: EF-0

Start Time: 12:41 a.m. August 6

Duration: 2 minutes

Estimated Peak Wind: 74 mph

Path Length: 0.85 miles

Path Width: 60 yards

This tornado began as a waterspout over Harbor River and crossed marshland and came ashore near 1st Coleman Road. It tracked along that road and lifted as it reached Seaside Road. The tornado primarily caused tree damage along its path, but it also broke a flagpole and damaged the metal skirting of a mobile home.



Tornadoes

Tornado 7: Lady's Island, Beaufort County

Rating: EF-0

Start Time: 12:28 a.m. August 6

Duration: 3 minutes

Estimated Peak Wind: 88 mph

Path Length: 2.14 miles

Path Width: N/A

This tornado began in marshland adjacent to Point Creek and moved northwestward across Holly Hall Road, Sheppard Road and S. C. Highway 802 (Sam's Point Road), then ended along Wade Hampton Drive. The tornado snapped several trees and caused other tree damage; no structural damage was caused directly by the tornado's wind, but some of the tree debris landed on homes and vehicles and caused damage.



Tornado 8: Moncks Corner, Berkeley County

Rating: EF-1

Start Time: 2:53 a.m. Tuesday, August 6

Duration: 7 minutes

Estimated Peak Wind: 95 mph

Path Length: 3.88 miles

Greatest Path Width: 150 yards

This tornado began along U. S. Highway 52 and moved northwestward through the north part of Monck's Corner, crossing over a part of Lake Marion before ending in Pinopolis. Several businesses and homes were damaged, with the worst damage at Arby's along McCormick Circle.



Additional Damage Photos



McConkey's Jungle Shack in Edisto Beach suffered major damage from the First Edisto Beach Debby Tornado. The restaurant was closed for many days after the tornado.

Photo Credit: Jimmy King



A home along Neptune Street in Edisto Beach had a board driven into its roof by the Second Edisto Beach Debby Tornado.

Photo Credit: Jimmy King

Additional Damage Photos



An SCDOT crew works to repair a washed-out section of Dubard Boyle Road in Richland County on August 15.

SCDOT Photo