

Hurricane Debby

KCC Loss Estimate

Based on the high-resolution KCC US Hurricane Reference Model, KCC estimates that the privately insured loss from Hurricane Debby will be close to \$1.4 billion in the US with approximately \$845 million from wind, \$130 million from storm surge, and \$440 million from inland flooding.

The estimate includes the privately insured damage to residential, commercial, and industrial properties and automobiles, as well as business interruption. It does not include boats, offshore properties, or NFIP losses.

Meteorological Highlights

- Hurricane Debby made two landfalls—first on August 5 as a Category 1 hurricane with 80-mph winds in Florida’s Big Bend region, and then again on August 8 as a tropical storm with 50-mph winds in South Carolina.
- The storm brought significant rain to the eastern US—the highest rainfall total from the storm was 18.16 inches near Parrish, FL, with totals upwards of 14 inches in Georgia and the Carolinas.
- An upper-level ridge over the western US created an environment with weak upper-level winds, which caused Debby to move slowly over the southeastern US. The lack of steering currents contributed to the erratic track shape off the coast of South Carolina.
- Hurricane Debby was the third hurricane in the past ten years to make landfall in Florida’s infrequently impacted Big Bend region, joining Hermine (2016) and Idalia (2023).

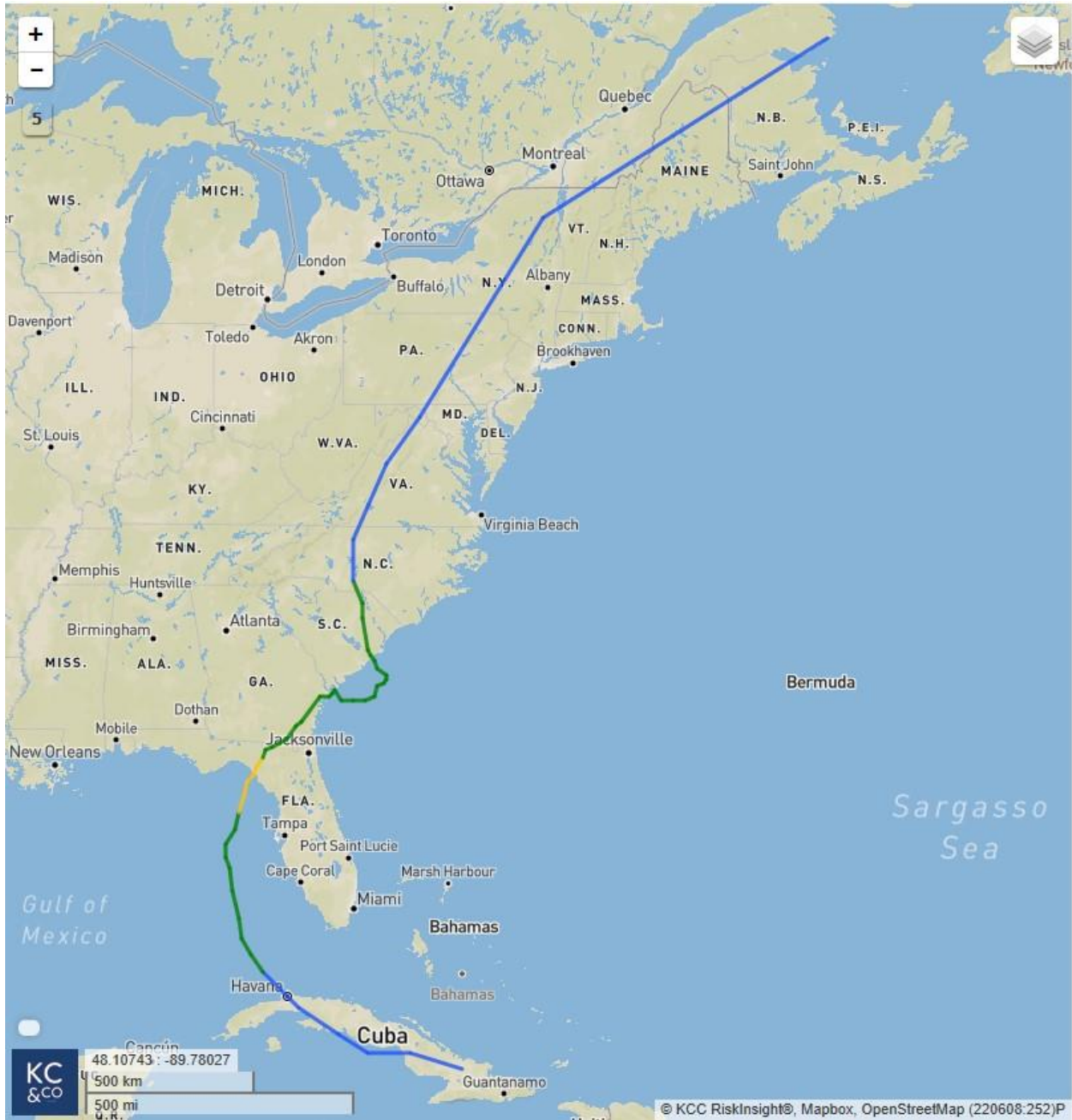
Meteorological Development

Hurricane Debby developed from a tropical wave that originated west of the Antilles. The storm became a tropical depression after crossing Cuba on August 3 and further intensified into Tropical Storm Debby later that day in the Gulf of Mexico. Debby continued to organize while moving through the Gulf, intensifying into a Category 1 hurricane late on August 4.

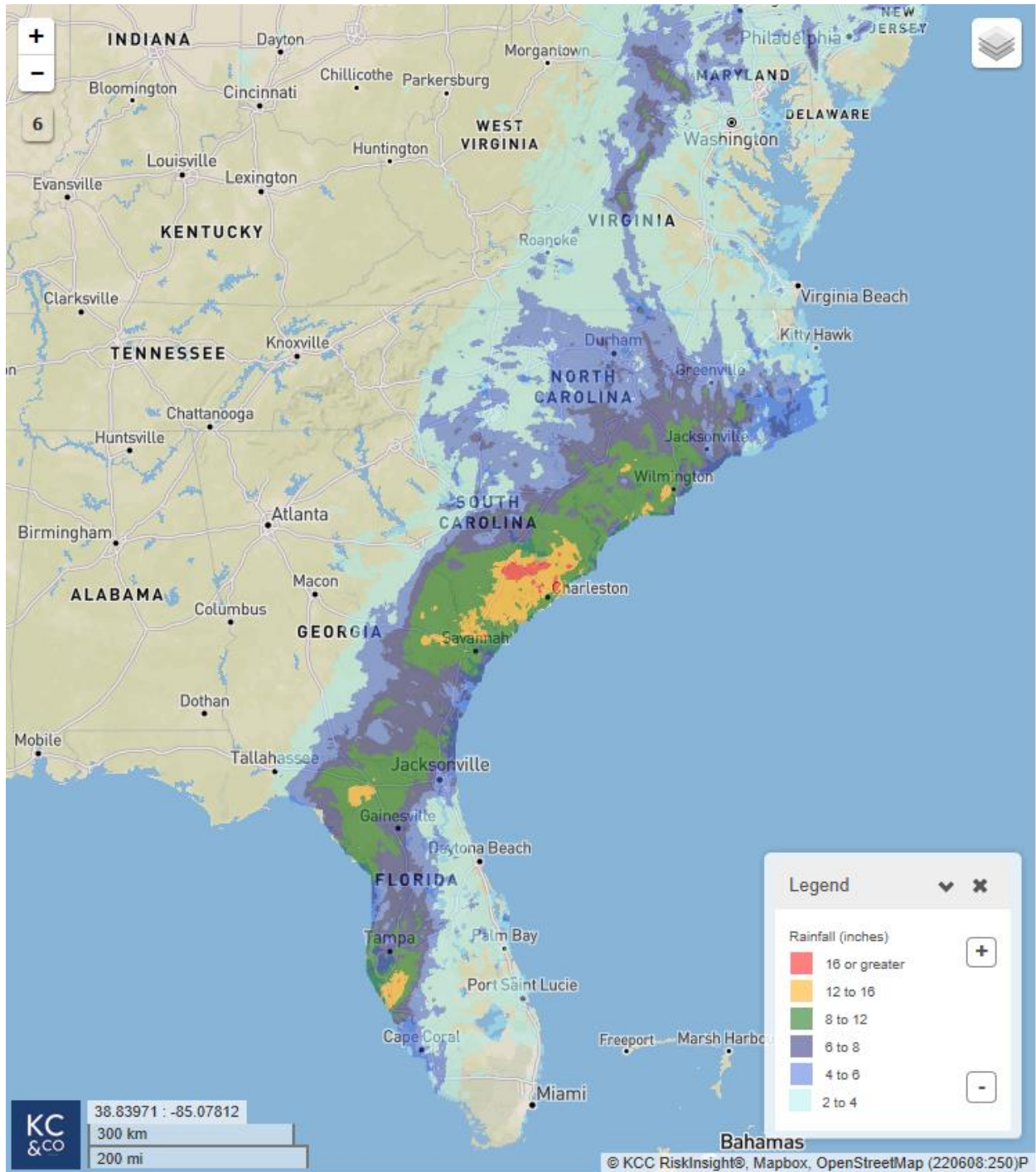
Hurricane Debby turned northeastward in response to a trough over the US and made landfall in Florida’s Big Bend near Steinhatchee at approximately 7 am on Monday, August 5 with maximum sustained winds of 80 mph—less than 20 miles from where Hurricane Idalia made landfall as a Category 3 hurricane in late August 2023. Debby then weakened to a tropical storm a few hours later while tracking inland. After moving offshore once again near the border of Georgia and South Carolina, the storm’s forward motion slowed and turned towards the northwest. Debby made a second landfall near Bulls Bay, SC as a tropical storm with maximum sustained winds of 50 mph around 2 am on August 8.

Following Debby’s second landfall, the storm steadily weakened to a tropical depression, becoming post-tropical the next day while moving north-northeast through the eastern US.

Hurricane Debby Track



Rainfall from Hurricane Debby



Impacts

For nearly a week, Hurricane Debby slowly moved up the eastern US, causing widespread damage from strong winds, storm surge, and inland flooding. Debby made an initial landfall as a Category 1 hurricane in a sparsely populated area of Florida and quickly weakened after moving inland, which limited the extent of wind-related damage.

Storm surge reached 6 feet in Cedar Key, Florida, and 4 feet at locations within Tampa Bay. Coastal flooding was reported in the towns of Crystal River and Horseshoe Beach, but flood waters were not as extensive or deep as those from last year's Hurricane Idalia and caused only minor damage. Debby's second landfall along the South Carolina coast led to storm surge of 1 to 2 feet.

Debby's slow forward motion allowed the storm to deliver significant rainfall along its path, resulting in widespread inland flooding all along the east coast. Rainfall totals in the southeast were well over a foot in some areas of Florida, Georgia, and the Carolinas. As the storm continued north, several inches of rain fell in a swath from Virginia up through Maine.
