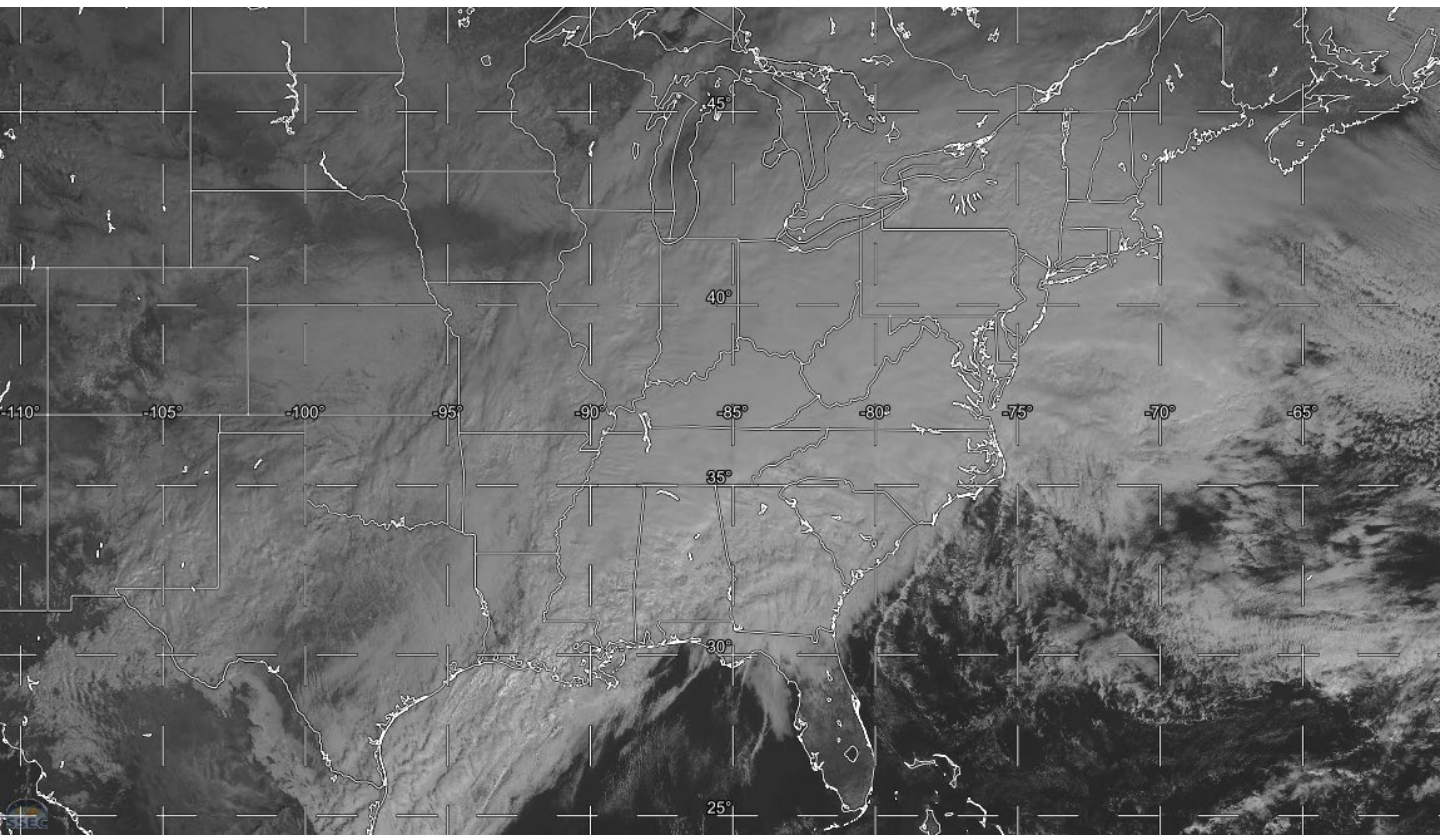
January 24-25, 2026 Winter Storm Open File Report

Prepared by the South Carolina State Climatology Office

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



A visible satellite image (GOES-East Full Disk Band 2) of the storm from 10:50 a.m. EST on Sunday, January 25, 2026, shows extensive cloud cover associated with a winter storm covering much of the eastern United States, including South Carolina

Source: University of Wisconsin RealEarth

Storm History And Impacts Report

March 20, 2026

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A webcam at ETV Rock Hill shows sleet coving roads, parking lots and roofs at 12:16 p.m. on January 25, 2026.

Image Source: WeatherSTEM

This report serves as a preliminary dissemination of information on the impacts of a winter storm on January 24-25, 2026, across South Carolina. If you have any additional questions regarding the data provided in this document, please contact Hope Mizzell, Frank Strait, or Melissa Griffin at the State Climatology Office.

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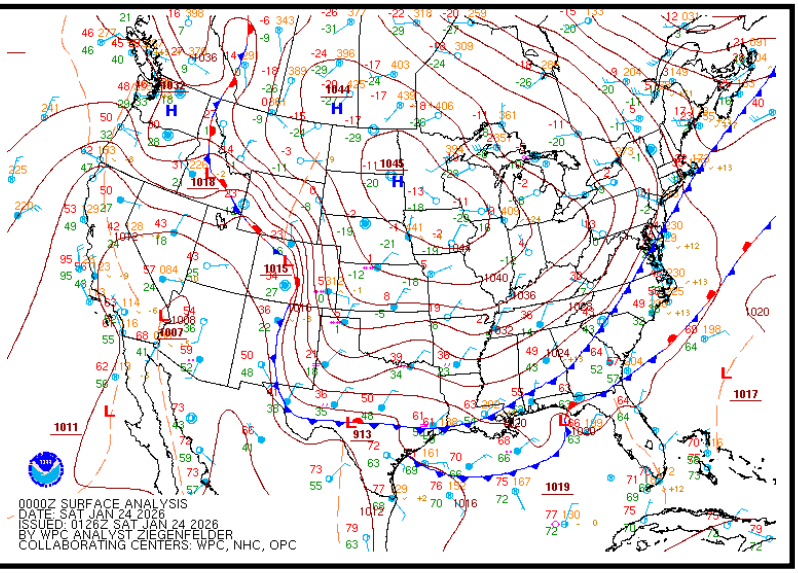
Synoptic Summary

The winter storm of late January 24-25, 2026, caused widespread heavy snow and sleet, and damaging ice buildup over a large part of the country, with over a foot of snow in a band from the southern Plains states to New England and a paralyzing ice storm for parts of the Southeast, including South Carolina. It posed significant challenges for weather forecasters. While it was expected well in advance that South Carolina would face a significant winter storm, there was considerable uncertainty about the storm's character.

January 2026 began with springlike warmth, with Columbia reaching 81°F on January 10. However, a turn to below-average temperatures began soon thereafter, with a low of 17°F reported in Columbia on January 16. Below-average temperatures continued ahead of this winter storm, with a fresh Arctic air mass arriving in the early morning hours of January 24.

A weather map from the Weather Prediction Center from 7 p.m. EST on January 23, 2026, shows a strong cold front crossing South Carolina with a bitterly cold high-pressure area (1045 mb centered over northeastern North Dakota) sprawling over much of eastern and central North America.

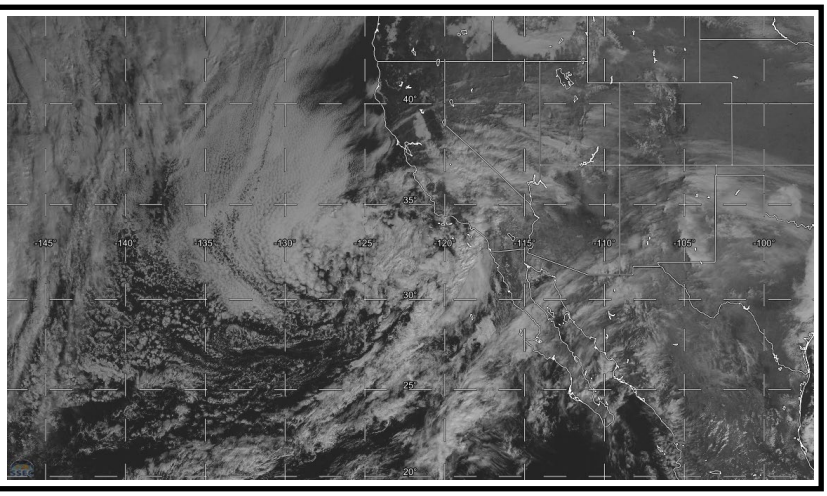


American meteorologists began tracking the features that brought the disruptive storm to the United States well in advance. One disturbance was over the eastern Pacific Ocean on January 20 and drifted south to the area off the Southern California coast by January 22.

Visible satellite imagery (GOES-West Full Disk Band 2) from 2 p.m. EST on January 22, 2026, shows a storm swirling off the Southern California coast.

It would go on to cause a widespread winter storm over the eastern two-thirds of the nation.

Source: University of Wisconsin RealEarth.

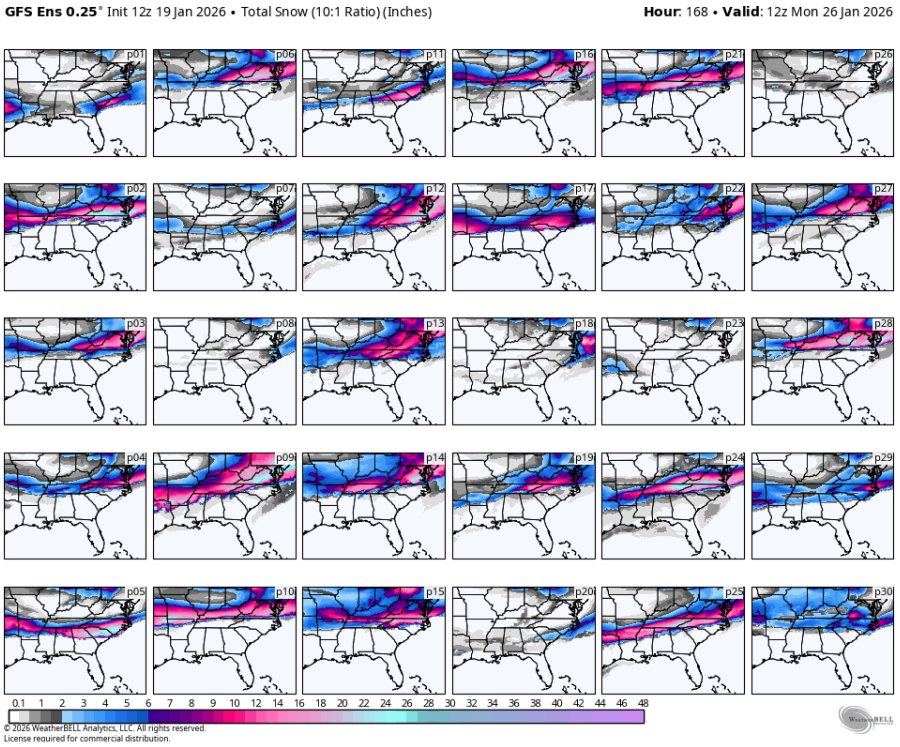


Synoptic Summary

A second feature dropped south on the polar jet stream through western Canada and into the western United States around the same time, while a third feature near Hudson Bay on January 23 moved through behind the other two upper-air disturbances. With some storms, two or three disturbances will combine to produce a more intense storm, but that was not the case here. The three disturbances instead moved in tandem across the eastern United States, producing three distinct precipitation waves across South Carolina.

Ahead of the storm, computer models showed a range of possible impacts on South Carolina. Many showed a band of heavy snow from West Texas to the East Coast, though its placement varied. Some models showed heavy snow in the Palmetto State. The models also generally agreed that an ice storm would occur in areas south of the area seeing heavy snow, likely affecting South Carolina. The models' forecasts of heavy snow shifted northward in time, while they continued to indicate the threat of a damaging ice storm over much of the state.

The storm from the Pacific was the first to push through, kicked out of Baja California by the second disturbance, which was diving southward through western Canada.



This is output from the GEFS model, initialized at 7 a.m. January 19, with the plot showing total snowfall forecast by the model from the initialization time through 7 a.m. January 26. Ensembles run by Environment Canada and the ECMWF indicated a similar variety of possibilities for the placement of a band of heavy snow that the storm would cause.

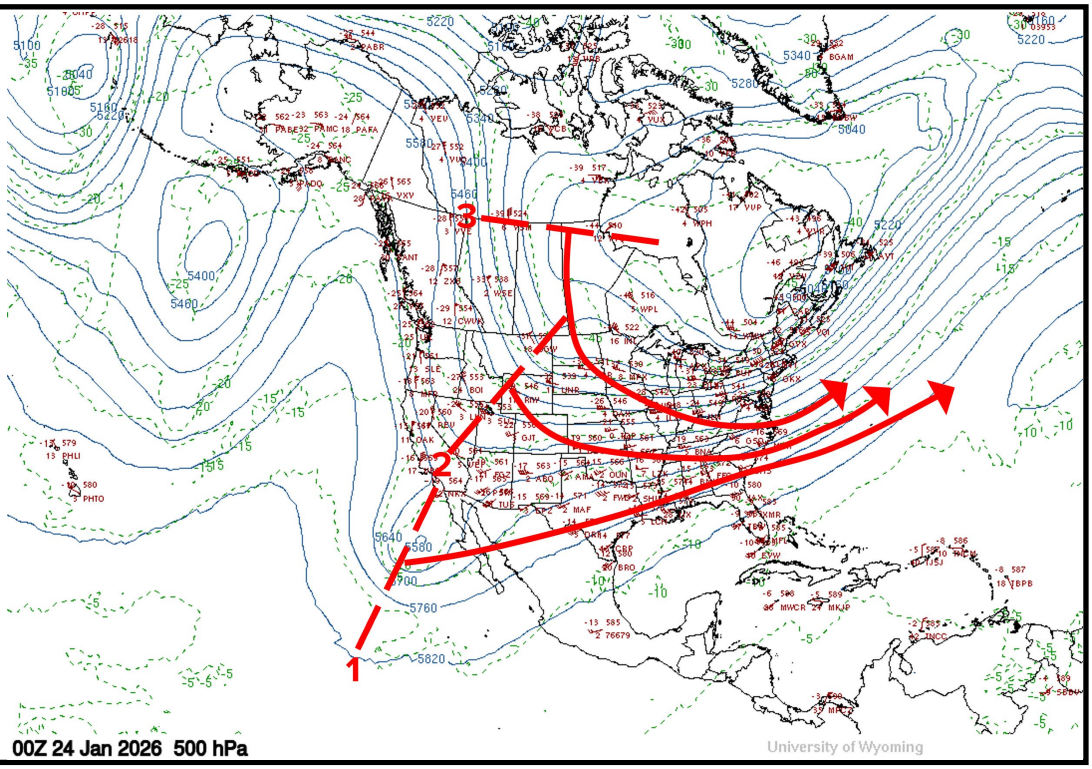
Image Source: WeatherBELL

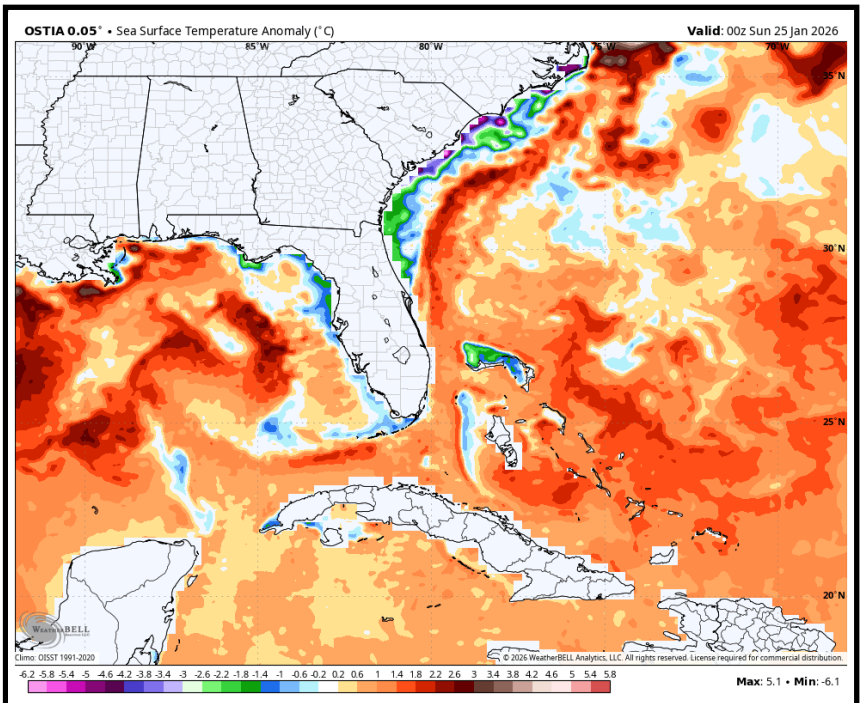
As a result, a surface low-pressure area formed east of Brownsville, Texas, that afternoon and tracked to eastern Kentucky by January 25. By evening, the surface storm center jumped to the East Coast and continued northeast that night. Rich moisture and warm air aloft surged northward ahead of the storm, but cold air damming kept most of South Carolina well below freezing on January 24. The cold air damming eroded enough for temperatures to rise above freezing over the Coastal Plain during the afternoon of January 25, but temperatures remained below freezing into that night in some northern parts of the state.

Synoptic Summary

An upper-air analysis of the 500 hPa level at 7 p.m. EST January 23, 2025, shows the three shortwave features responsible for the winter storm of January 24-25, 2026, and their tracks across the United States.

Image Source: University of Wyoming





This plot of sea surface temperature anomalies around the southeastern U.S. shows mostly warmer-than-average waters on the evening of January 24, 2026.

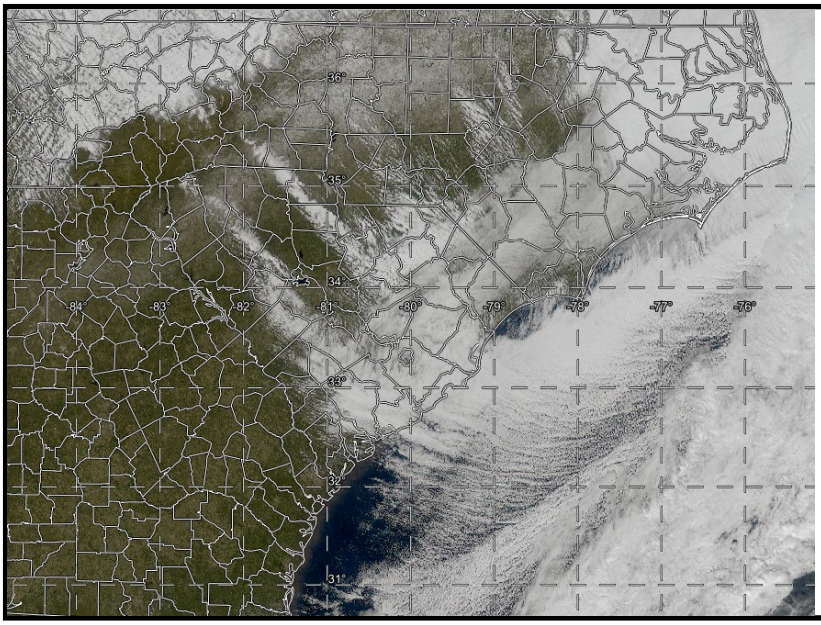
Image Source: WeatherBELL

Another factor in the storm was mostly warmer-than-average sea temperatures around the southeastern U.S. Waters were cold near shore off the East Coast, a lingering effect of a December 2025 cold wave, and persistent offshore winds that caused upwelling. However, most other areas were much warmer than average. The warm waters offshore contributed to the tendency for an upper-level ridge to be over Florida and Cuba, and for a more northward storm track. The warm waters also helped to bring temperatures above freezing on January 25 as the wind turned southeasterly.

Synoptic Summary

Precipitation first occurred in South Carolina with this event on the evening of January 23. This first salvo occurred as a weak disturbance tracking along the cold front moving through South Carolina brought a couple of hours of snow, sleet and rain to parts of the state. Little or no snow accumulation occurred with this system. The main event began on the morning of January 24, with a first wave of light precipitation, mainly in the form of sleet, falling across the Upstate region, associated with the lead shortwave feature from northern Mexico. Additional light precipitation affected the I-20 Corridor and points northward during the midday and early afternoon hours. This was primarily sleet, with some light snow in some areas. Outside the Upstate, little snow or sleet accumulated. Additional light precipitation, mainly sleet in the north and rain or freezing rain in the south, occurred off and on that night.

The snow caught forecasters by surprise. Temperatures were well above freezing in a layer aloft, while a deep layer of subfreezing air lay below, with surface temperatures mainly in the mid-20s. A leading theory for how the snow happened is that snow formed far aloft, melted while falling through the warm layer, then froze into ice pellets (sleet) upon encountering subfreezing air on the way down. However, freezing from the outside in led to liquid water being encased in a shell of ice, which then fractured from internal pressure or by striking other ice pellets. The shards of ice then accreted ice crystals as they approached the ground in very cold, but humid, air near the surface, forming needle-like snowflakes.



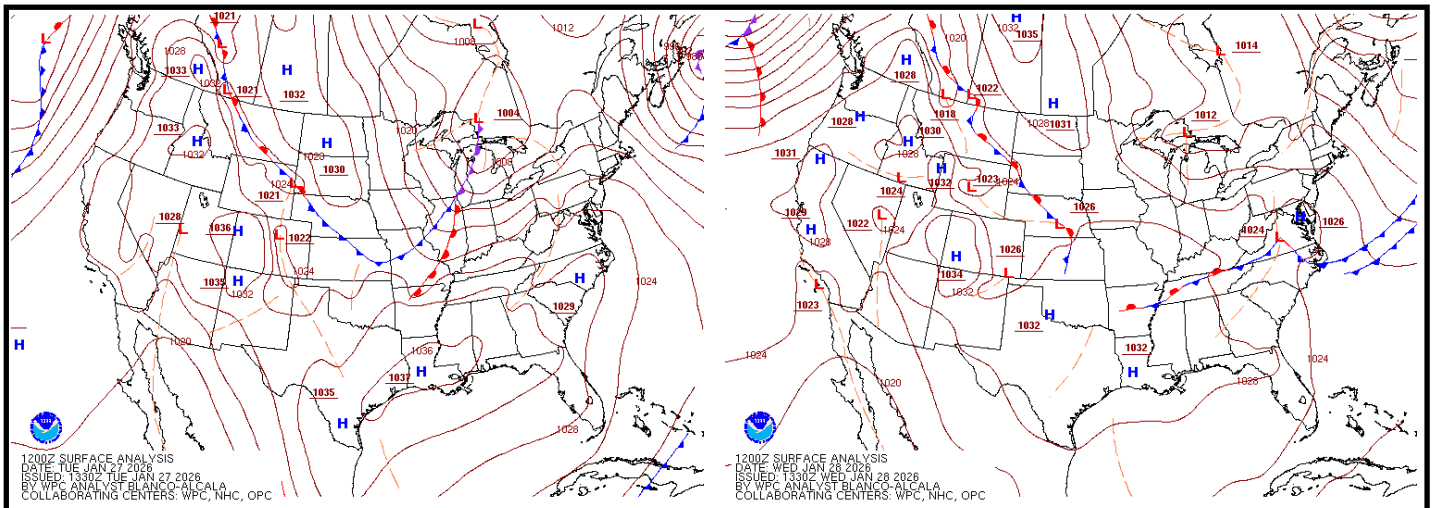
A visible satellite image from 11:42 a.m. on January 26, 2026, showing lingering ice over Upstate South Carolina in the wake of the storm. Clouds streaming downwind from the mountains in North Carolina partly obscure the view.

Image Source: University of Wisconsin RealEarth

Precipitation became steadier and heavier over the Upstate during the early morning hours of January 25 as the second shortwave feature aloft moved in. This fell primarily as sleet with some freezing rain mixed in. Precipitation became light again later that morning, but a band of heavier precipitation associated with the third feature aloft reached western South Carolina during the early afternoon and moved steadily eastward. This was a mix of freezing rain and sleet in the Upstate and primarily freezing rain along the I-20 Corridor. Areas farther to the southeast saw rain primarily as temperatures had risen above freezing by the time this precipitation reached the Coastal Plain. Precipitation ended from west to east that night, with the back edge of it crossing the Upstate during the evening and moving over the coastal areas just after daybreak on January 26.

Synoptic Summary

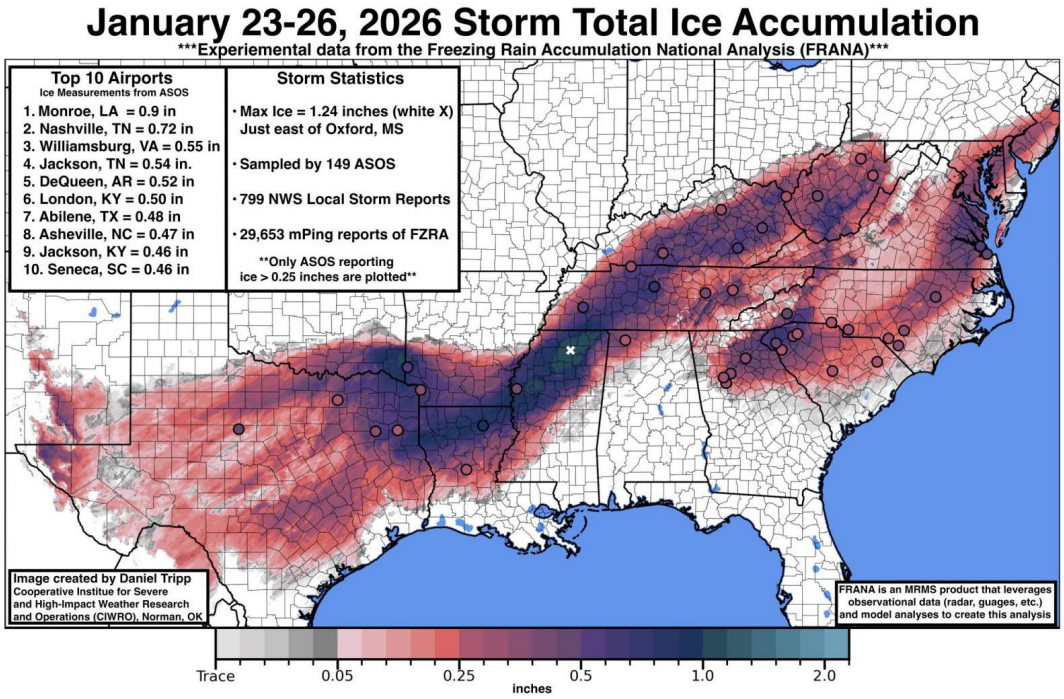
After the storm, high pressure settled into the region on January 26, and the sky cleared. As a result, the combination of a clear sky and light winds that night, with ice covering the ground across much of the Upstate, allowed for efficient heat radiation into space. The result was bitterly cold temperatures by the morning of January 27. Low temperatures ranged from the low teens in the Upstate to the mid-20s along the Lowcountry coast. Because melting was slow over the Upstate that day, and temperatures fell into the 20s again that night, icy conditions lingered on some Upstate roads into the morning of January 28.

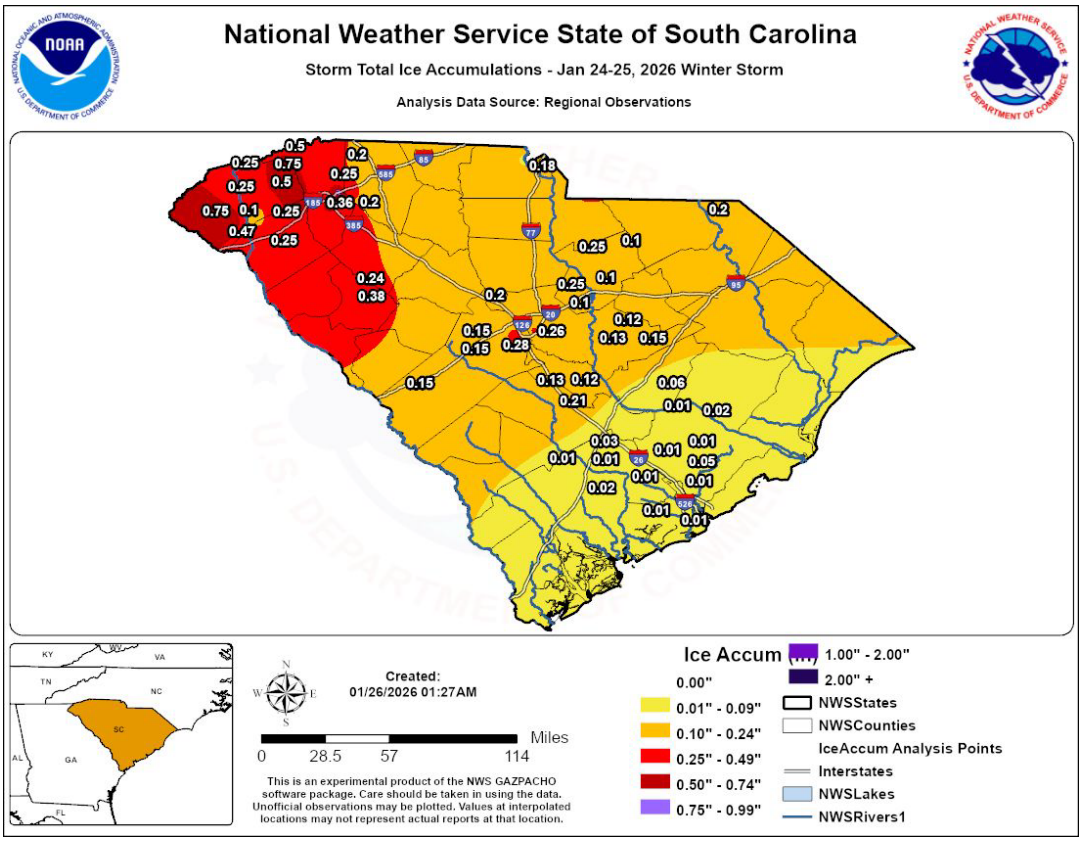


Weather maps from the Weather Prediction Center from 7 a.m. January 26, 2026 (left) and 7 a.m. January 26, 2026 (right) featured high pressure over the southeastern U.S., resulting in clear skies and light winds.

Storm Impacts – Ice Accretion

The primary impact of the storm across the southern U.S. was widespread ice buildup from freezing rain, from New Mexico to southern New Jersey. While the heaviest ice buildup occurred from northern Louisiana to Kentucky, Upstate South Carolina and adjacent areas of Georgia and North Carolina also saw a damaging ice accretion. The peak ice accretion in South Carolina was three-quarters of an inch, which occurred in parts of Oconee and Pickens Counties. This area saw considerable tree and power line damage. Isolated tree and power line damage occurred across the rest of South Carolina outside the Coastal Plain, along with icy roads, particularly on elevated road surfaces. Over most of the Coastal Plain, impacts were limited to slippery bridges and overpasses along the Coastal Plain for a time.





Storm Impacts – Ice Accretion

Selected SC Ice Buildup Measurements January 24-25

Location	County	Ice, Inch	Source
3 WNW Pumpkintown	Pickens	0.75	Amateur Radio
1 NE Easley	Pickens	0.75	Public
1 ENE Seneca	Oconee	0.75	Public
Oconee County Airport	Oconee	0.47	NOAA
Anderson County Airport	Anderson	0.25	NOAA
1 NW Caesar's Head	Greenville	0.50	Public
Greenville Downtown Airport	Greenville	0.36	NOAA
GSP Airport	Spartanburg	0.29	NOAA
3 W Inman	Spartanburg	0.20	NWS Employee
Rock Hill-York County Airport	York	0.18	NOAA
Greenwood County Airport	Greenwood	0.24	NOAA
4 NNW Gloverville	Aiken	0.15	Public
Columbia Metro Airport	Lexington	0.28	NOAA
Cayce	Lexington	0.20	Law Enforcement
Columbia Hamilton-Owens Airport	Richland	0.28	NOAA
Orangeburg Airport	Orangeburg	0.18	NOAA
Camden	Kershaw	0.10	Emergency Management
3 NNE Elgin	Kershaw	0.25	NWS Employee
Cheraw	Chesterfield	0.20	Utility Company
5 S Hartsville	Darlington	0.12	Public
Florence	Florence	0.18	NOAA
Marion	Marion	0.20	Public
Clio	Marlboro	0.15	Public
Galivants Ferry	Horry	0.10	Public
N. Myrtle Beach	Horry	0.06	NOAA
Kingstree	Williamsburg	0.10	Public
2 S Moncks Corner	Berkeley	0.05	CoCoRaHS
Walterboro	Colleton	0.02	Public
Reevesville	Dorchester	0.03	Public

Storm Impacts – Sleet and Snow Accumulation

While light snow fell briefly in some locations around South Carolina from this storm, frozen precipitation primarily came in the form of sleet. Measurable sleet accumulations were confined to the northern part of the state and mostly occurred in the Upstate.

Selected SC Sleet Accumulations January 24-25

Location	County	Sleet, Inches	Source
Antreville	Abbeville	0.3	COOP
Piedmont 4.7 SSW	Anderson	0.8	CoCoRaHS
Lockhart 5.4 N	Cherokee	1.8	CoCoRaHS
Jefferson 0.1 NW	Chesterfield	0.8	COOP
Piedmont 4.7 WSW	Anderson	0.8	CoCoRaHS
Paris Mountain 0.7 NW	Greenville	2.7	CoCoRaHS
Greer 1.6 SW	Greenville	2.0	CoCoRaHS
Gowensville 0.4 SSE	Greenville	1.0	CoCoRaHS
Greenwood 1.4 N	Greenwood	0.4	CoCoRaHS
Lugoff 2 NE	Kershaw	0.1	COOP
Newberry 1.0 N	Newberry	0.1	CoCoRaHS
Walhalla	Oconee	1.7	COOP
Keowee Key 1.4 WNW	Oconee	1.4	CoCoRaHS
Long Creek	Oconee	1.0	COOP
Six Mile 2.1 NE	Pickens	1.5	CoCoRaHS
Pickens	Pickens	1.2	COOP
Table Rock	Pickens	1.0	COOP
Lyman 4.1 WNW	Spartanburg	1.8	CoCoRaHS
GSP Airport	Spartanburg	1.5	NOAA
Inman 2.9 W	Spartanburg	1.3	CoCoRaHS
Santuck	Union	0.3	COOP
Fort Mill 2.3 W	York	1.0	CoCoRaHS
Tega Cay 1.6 ESE	York	0.7	CoCoRaHS
Winthrop University	York	0.5	COOP
St. Matthews 1 SE	Calhoun	Trace	CoCoRaHS

Storm Photos

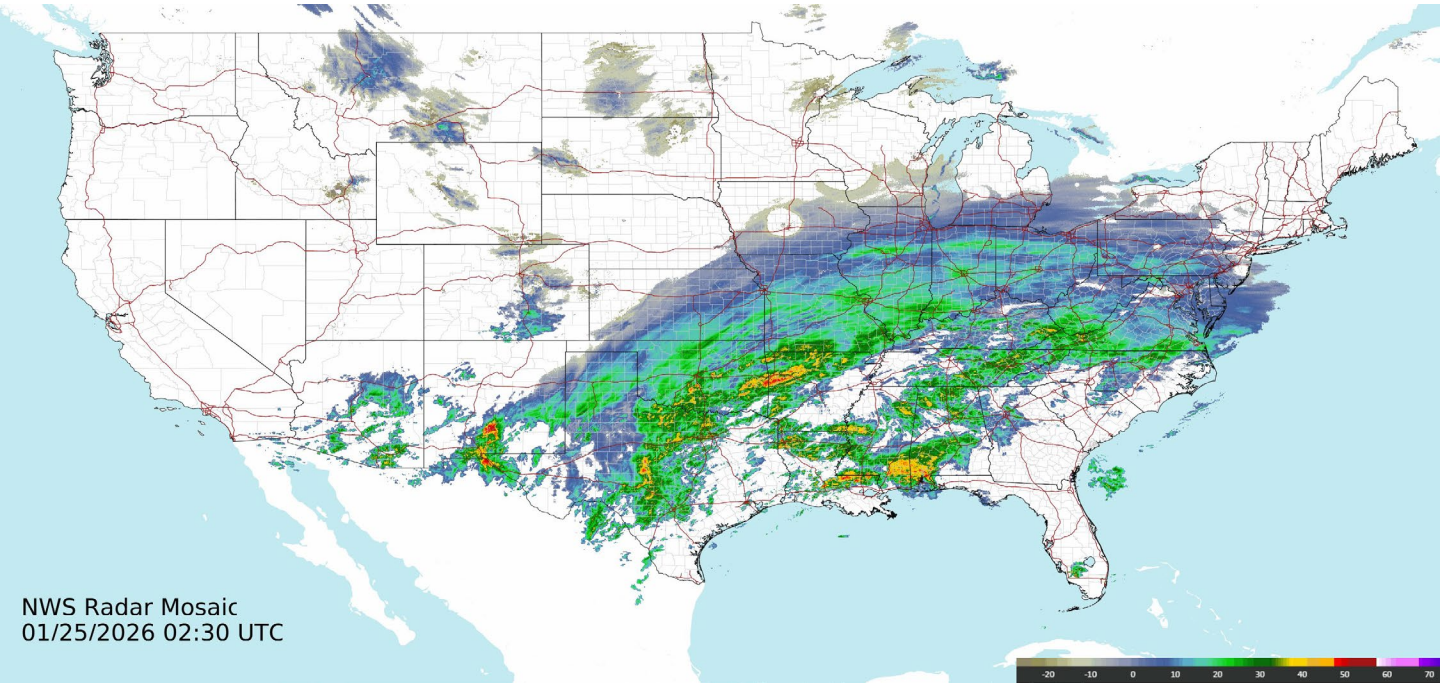
Ice buildup on trees and shrubs in Easley

Photo used with permission of the creator

SCDOT worked hard to keep the roads passable in the Carolina Crossroads section of Richland and Lexington Counties ahead of the storm.

SCDOT Photo

Storm Photos



This weather radar composite from 10:30 p.m. EST on January 24 shows a large part of the nation was impacted by this winter storm with snow to the north, sleet and freezing rain farther south, and thunderstorms along the Gulf Coast. There was even an outbreak of severe thunderstorms and tornadoes in the Florida Panhandle and adjacent areas of Alabama and Georgia on January 25.

Sleet and an icy glaze made Upstate roads slick on January 25. This is the Salem Irene Bridge along S. C. Highway 211 (Hickory Grove Road) leading into Cherokee County from York County.