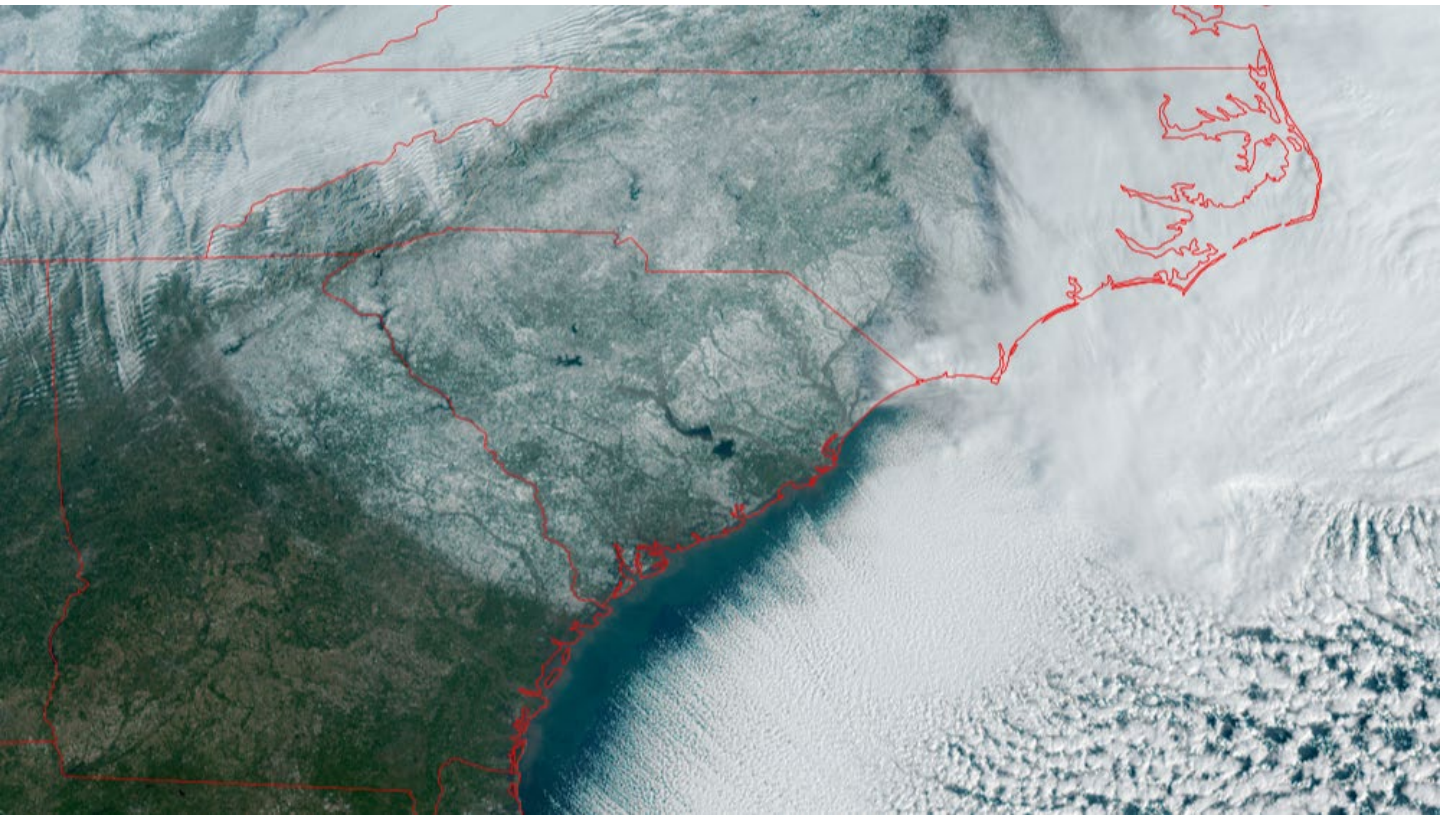
January 31, 2026, Winter Storm Open File Report

Prepared by the South Carolina State Climatology Office

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



A visible satellite image (GOES-East CONUS Geocolor RGB) from 8:48 a.m. EST on Sunday, February 1, 2026, shows snow cover across South Carolina and clouds over the southern Appalachians, eastern North Carolina, and the Atlantic Ocean.

Source: SLIDER by RAMMB from CIRA at Colorado State University

Storm History And Impacts Report

March 20, 2026

Table of Contents

A webcam at SCDNR's Webb Wildlife Center in Hampton County shows snow falling and accumulating at 5:49 p.m. on January 31, 2026.

Image Source: WeatherSTEM

This report serves as a preliminary dissemination of information on the impacts of a winter storm on January 31, 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.

Hope P. Mizzell
South Carolina State Climatologist
MizzelH@dnr.sc.gov
803-734-9568

Frank Strait
Severe Weather Liaison
StraitF@dnr.sc.gov
803-734-0039

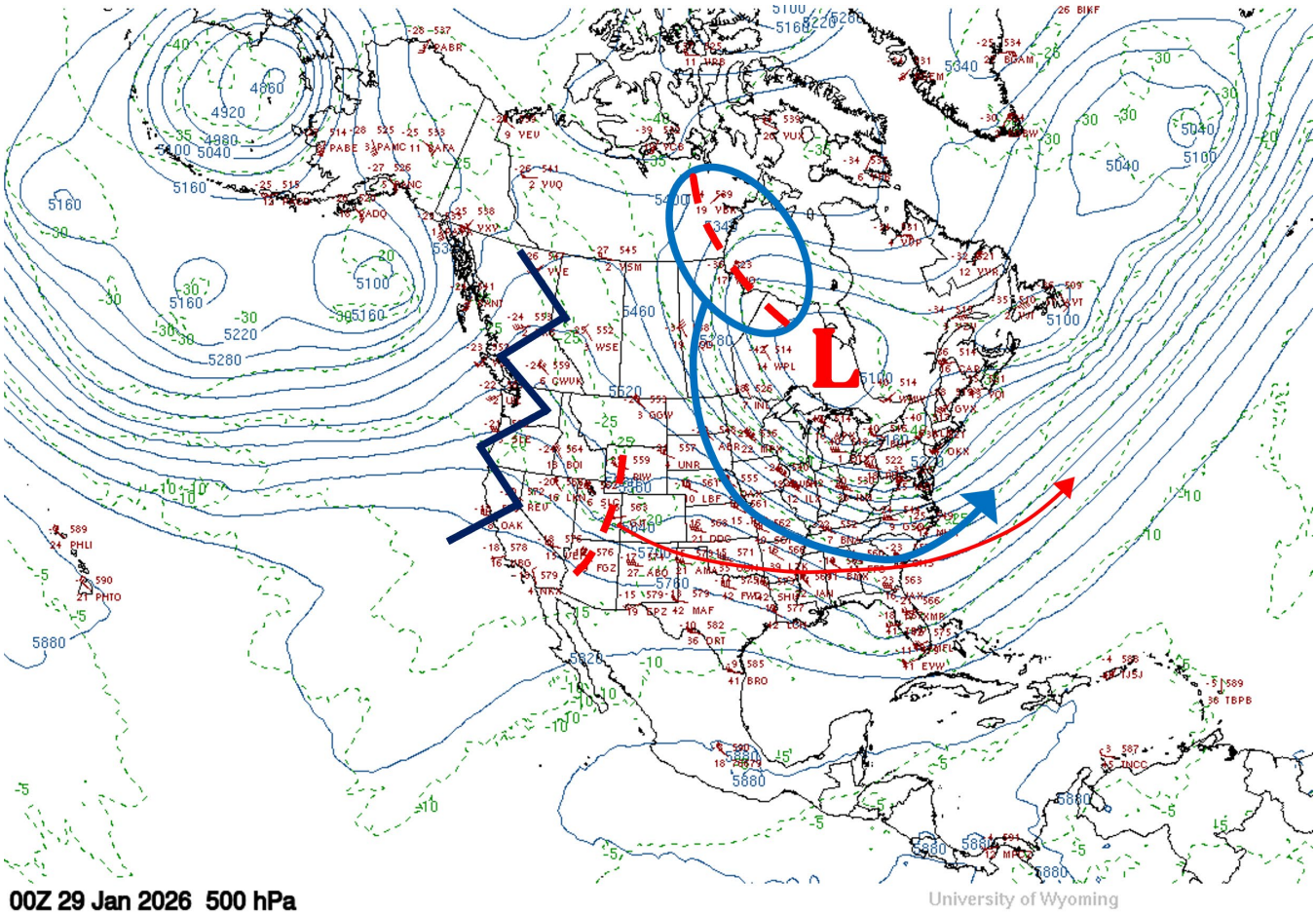
Melissa Griffin
Assistant State Climatologist
GriffinM@dnr.sc.gov
803-734-9091

South Carolina Department of Natural Resources
Land, Water, and Conservation Division
260 D. Epting Lane, West Columbia, SC 29172

Synoptic Summary

The winter storm of January 31 was the second of two winter storms to affect South Carolina in short succession. It resulted in the second consecutive weekend of wintry conditions across the state.

The potential for a second winter storm was realized even before the first hit. Meteorologists noted over a week in advance that a weather pattern allowing for a widespread winter storm in the Carolinas, featuring an upper-level trough over eastern North America and an upper-level ridge over western North America, would be in place around January 31.



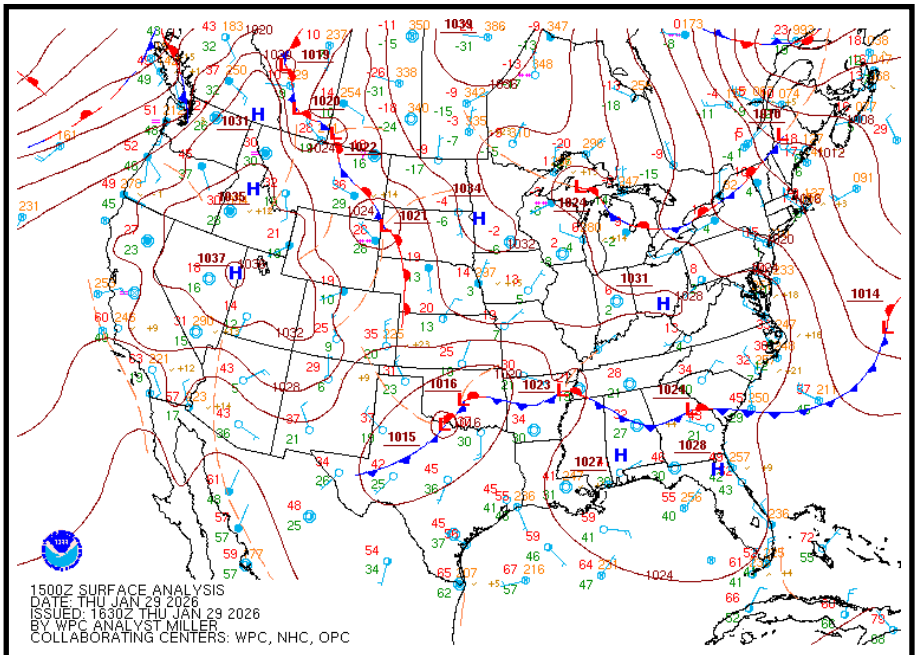
This analysis of the 500 mb level (around 18,500 feet) shows the weather pattern over North America in place at 7 p.m. EST on January 29, 2026. A longwave ridge (annotated with a dark blue zig-zag line) was in place near the West Coast, while a longwave upper-level trough was present over eastern North America. Prominent shortwave trough features (annotated with a dashed red line) were over the Rocky Mountains and over Western Hudson Bay. The shortwave over the Rockies (following a track indicated by the red arrow) would bring clouds and stray rain showers to South Carolina on the evening of January 30. The Hudson Bay shortwave (following a track indicated by the blue arrow) would cause the winter storm of January 31.

Image Source: University of Wyoming Weather Web

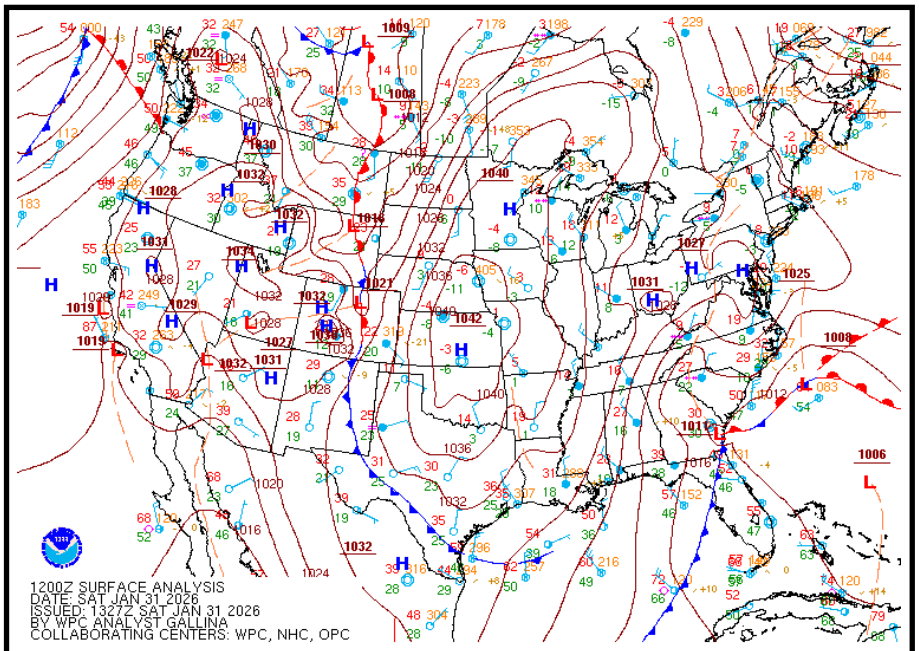
Synoptic Summary

A cold front crossed South Carolina on January 29, delivering fresh arctic air. A weak upper-level disturbance then moved through the southeastern states late on January 30, triggering spotty light rain showers. The arctic air became entrenched over South Carolina that night.

The disturbance responsible for South Carolina's winter storm was over western Hudson Bay on January 29. It dropped southward through January 30, following the upper-air flow around a longwave upper trough present over eastern North America. It spawned surface low pressure over southern Georgia during the early morning hours of January 31, which moved northeastward along the coast.



This surface weather map from the Weather Prediction Center from 10 a.m. EST on January 29, 2026, shows a cold front crossing South Carolina while arctic high pressure presses southward from Canada.



This surface weather map from the Weather Prediction Center from 7 a.m. EST on January 31, 2026, shows the winter storm centered near Savannah, Georgia while arctic high pressure was centered near Wichita, Kansas.

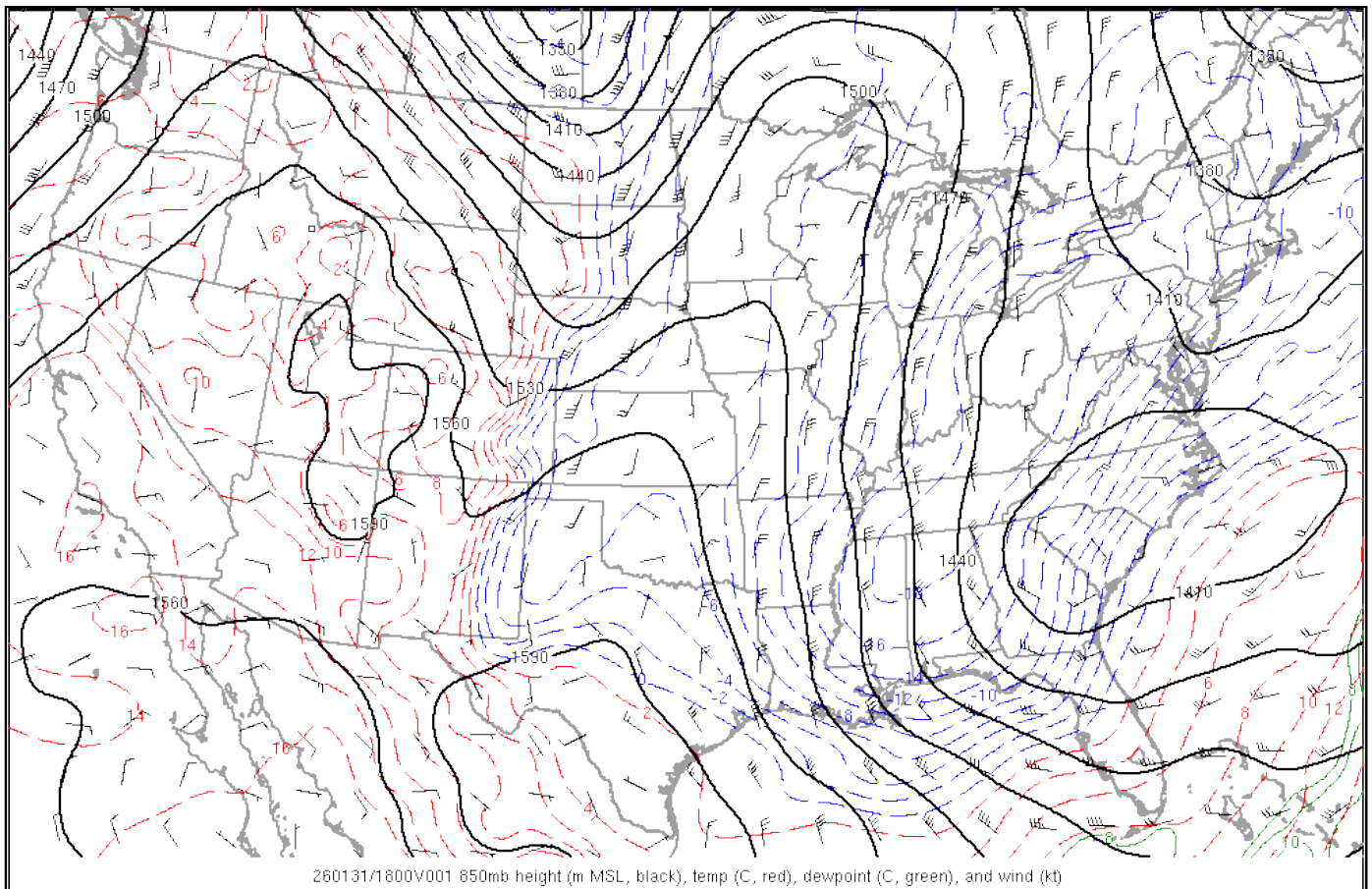
Storms that follow this track during the coldest part of the year, when an arctic air mass is in place, normally cause a snowstorm in South Carolina, and this was no exception. Snow began over the Upstate during the early morning hours of January 31, and the snow spread over the state through the morning and early afternoon. The snow began as a period of rain, freezing rain, or sleet in some coastal locations, but no significant ice buildup occurred. The snow continued through the day before tapering off from west to east that night. The snow was heavy over most northern parts of the state, causing hazardous travel conditions.

Synoptic Summary

The storm was remarkable in that the unusual cold present at the surface and aloft resulted in unusually high snow-to-liquid ratios. The snow-to-liquid ratio, or SLR, is the ratio of snowfall to melted liquid precipitation. The typical SLR is 10:1, meaning that 10 inches of snowfall will melt down to one inch of liquid. However, in South Carolina, the SLR tends to be around 8:1 because it usually is not as cold during a snowstorm as it is in places where snow is more common. Meanwhile, an SLR of 12:1 or 15:1 is more common in areas such as New England and the Upper Midwest.

The SLR is dependent on temperatures throughout the atmosphere, not just near the surface. The amount of humidity in the cloud where snow crystals form also plays a role; the greater the degree of supersaturation, the higher the SLR.

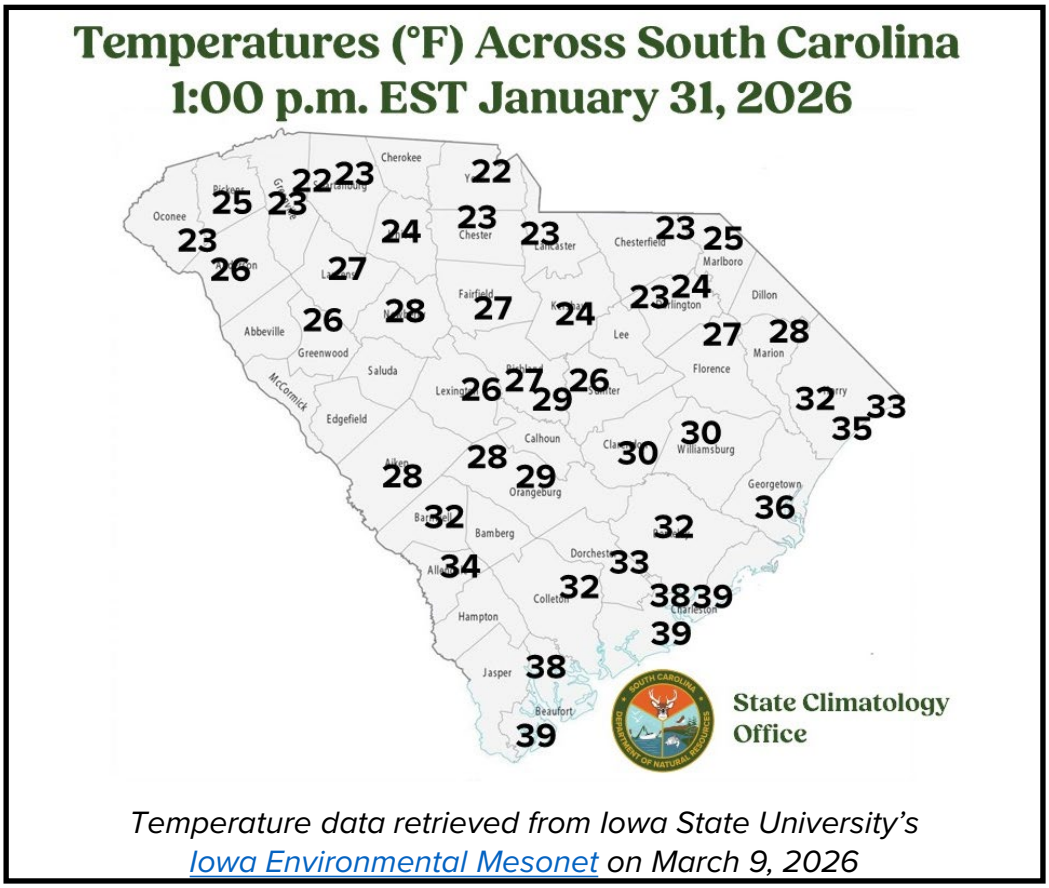
Temperatures are the dominant factor, though. To an extent, colder air will result in a higher SLR, with a maximum SLR found around -15°C (5°F) in the cloud where ice crystals form and temperatures well below freezing below the cloud to the surface.



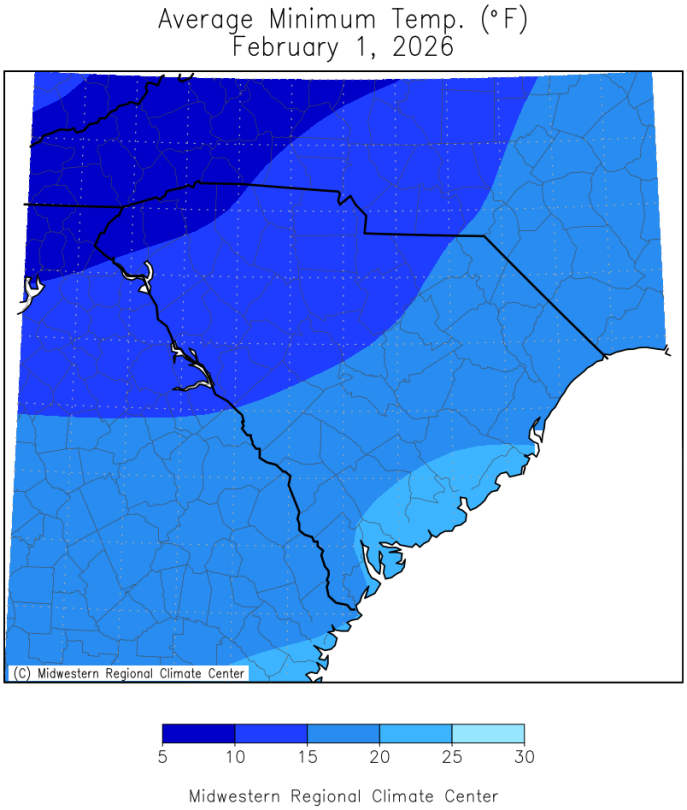
The Storm Prediction Center Mesoscale Analysis of 850 mb temperatures across the Continental U. S. from 1 p.m. EST on January 31, 2024, shows temperatures at this level ranging from around -16°C (3.2°F) in the Upstate to -4°C (24.8°F) at the coast.

Synoptic Summary

On January 31, temperatures in the clouds where snow crystals were forming were nearly ideal for high SLR snow. It was also well below freezing beneath the snow crystal formation zone aloft, including the surface. This allowed the snow to reach the surface without partially melting. Hours of subfreezing temperatures over most of the state allowed the snow to accumulate from the first flakes, rather than warm ground melting snow for minutes to hours after onset.



Temperature data retrieved from Iowa State University's [Iowa Environmental Mesonet](#) on March 9, 2026



Bitterly cold air rushed in behind the storm, sending temperatures plummeting as the snow tapered off during the early morning hours of February 1. Low temperatures ranged from the single digits in a part of the Upstate to the lower 20s near the coast in the Lowcountry. Despite the return of sunshine, highs on February 1 were mostly in the 30s and lower 40s across the state, while winds gusted to 35-40 mph. The winds caused blowing and drifting snow along with bitterly cold wind chills. The coldest night after the storm followed for most locations in South Carolina, with lows on the morning of February 2 in the single digits and teens across most of the state, with several locations setting or tying daily record lows. A monthly record low was set at Florence Regional Airport, where the temperature reached 8°F, breaking the previous record of 11°F set on February 5, 1996. Observations began there on January 1, 1948.

Synoptic Summary

A low of 3°F at the Rock Hill-York County Airport was the coldest on record for that station, but its period of record is short, with observations beginning there on February 1, 1999. That airport is also not the station of record for Rock Hill. Rock Hill's official weather reports come from a cooperative observer at Winthrop University, where a daily record low was set on February 2. That station began observations on December 14, 1899.

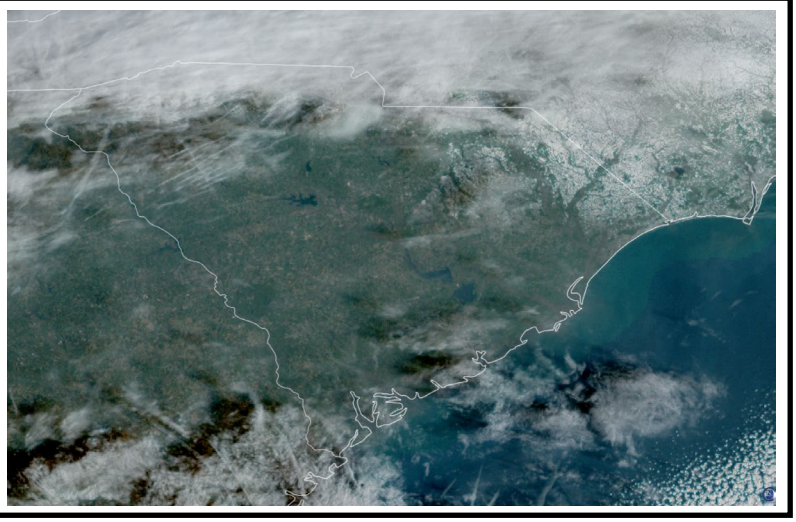
Daily Record Low Temperatures In South Carolina February 2, 2026

Location	County	Low Temperature °F	Previous Record Low and Year
Winthrop University	York	7	12, 1979
Florence	Florence	8	18, 1980
North Myrtle Beach	Horry	19	20, 1945
Charleston International Airport	Charleston	19	19, 1980
Greenwood County Airport	Greenwood	14	20, 2013
Orangeburg Municipal Airport	Orangeburg	17	24, 2000

Temperatures recovered to the 40s and 50s over most of the Coastal Plain, Midlands and Central Savannah River Area on the afternoon of February 2, but only peaked in the 30s over the northern part of the state, leading to a slow melting of the lingering snow cover. Another bitterly cold night followed in areas that still had snow cover, with lows in the single digits and teens across the north. Travel remained slippery in areas with lingering snow cover into January 3. Temperatures then recovered to the 40s and 50s across most of the state that afternoon, melting away most of the lingering snow cover.

Geocolor imagery from the GOES-East satellite (CONUS Sector) from 8:26 a.m. on January 3, 2026, shows lingering cloud cover over the Pee Dee Region. Cloud cover obscures the view of snow cover over the Upstate and Catawba regions.

Image source: SLIDER by RAMMB at Colorado State University



Snowfall Reports

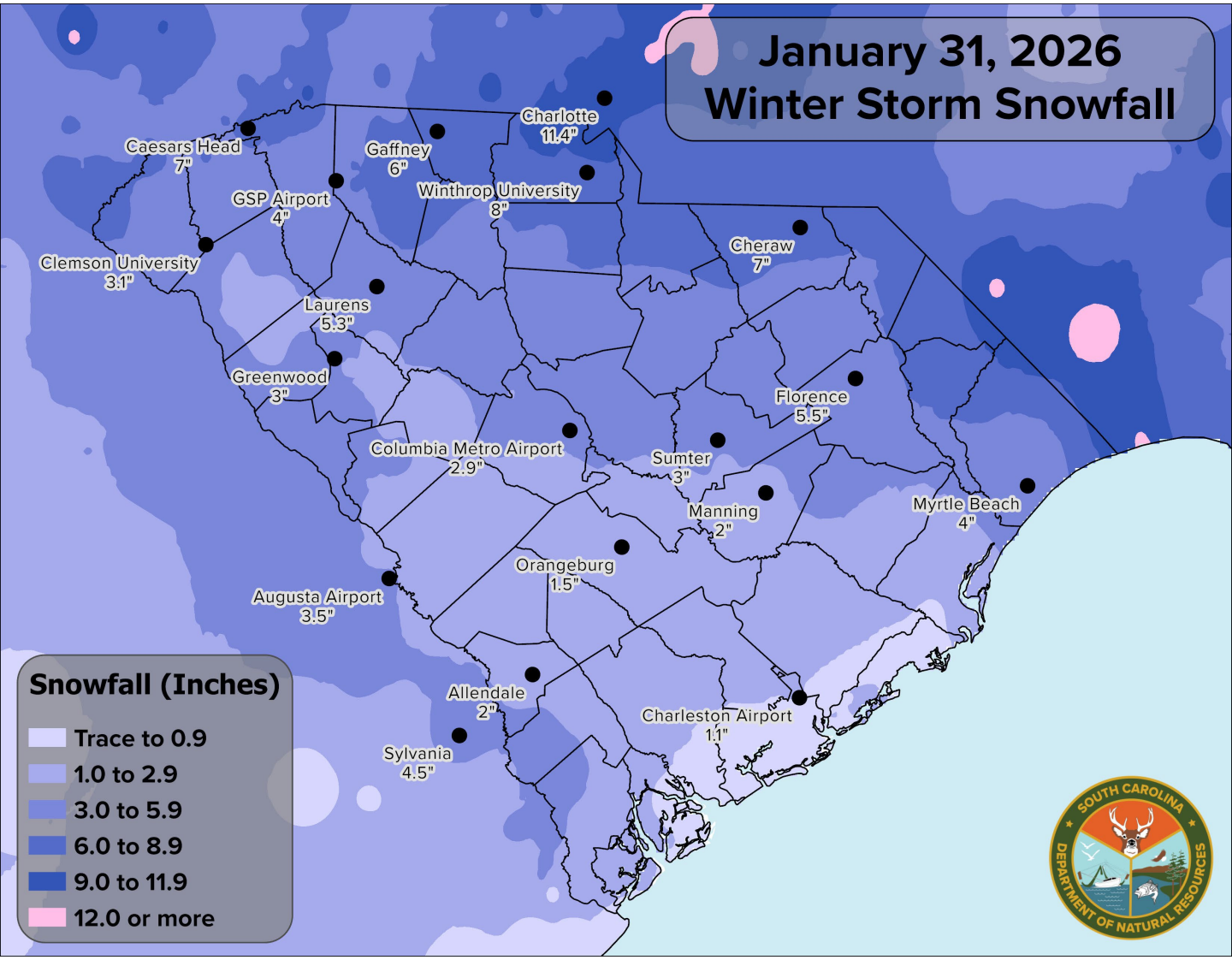
Select Snowfall Reports Around South Carolina, Along With Precipitation and SLR

Data For January 31 through February 1, 2026

Station Name	County	Provider	Snowfall (Inches)	Precipitation (Inches)	SLR (:1)
Tega Cay 1.6 ESE	York	CoCoRaHS	11.6	0.44	26.4
Jocassee 8 WNW	Oconee	COOP	8.5	0.29	29.3
Mullins	Marion	COOP	8.3	0.26	31.9
Winthrop University	York	COOP	8.0	0.50	16.0
Pageland 9.0 WNW	Chesterfield	CoCoRaHS	8.0	0.32	25.0
Caesars Head	Greenville	COOP	7.0	0.22	31.8
Catawba	York	COOP	6.9	0.25	27.6
Lancaster 6.9 ENE	Lancaster	CoCoRaHS	6.0	0.25	24.0
Piedmont 4.7 WSW	Anderson	CoCoRaHS	5.0	0.14	35.7
Darlington 7.5 SSW	Darlington	CoCoRaHS	5.0	0.30	16.7
Iva 6.4 SSW	Abbeville	CoCoRaHS	4.2	0.21	20.0
Blair 6.3 ESE	Fairfield	CoCoRaHS	4.1	0.19	21.6
GSP Airport	Spartanburg	NOAA	4.0	0.22	18.2
Clinton	Laurens	COOP	4.0	0.27	14.8
Newberry	Newberry	COOP	4.0	0.25	16.0
Lugoff 2.0 W	Kershaw	CoCoRaHS	3.3	0.22	15.0
Clemson University	Pickens	COOP	3.1	0.14	22.1
McCormick 12.9 E	Edgefield	CoCoRaHS	3.1	0.12	25.8
Columbia Metropolitan Airport	Lexington	NOAA	2.9	0.22	13.1
Charleston International Airport	Charleston	NOAA	1.1	0.07	15.7
Okatie 3.5 NE	Beaufort	CoCoRaHS	1.9	0.06	31.7

Snow with a high SLR is dry and powdery, an uncommon sight in South Carolina. Dry snow is less dense than snow with a low SLR and does not effectively stick to trees and power lines. Therefore, the only impact in South Carolina from the snow was slippery travel. The few power outages in the state were not caused by the storm.

Snowfall Reports



This map was generated using selected snowfall reports from official NOAA observations, cooperative observers, CoCoRaHS observers, and some public reports deemed reliable after a review by the State Climatology Office.

Storm Photos

I-95 near the North Carolina state line was slippery but passable on the evening of January 31.

SCDOT Photo

SCDOT works to keep I-26 in Lexington County passable on the afternoon of January 31.

SCDOT Photo

Storm Photos

Roads remained snow-covered and slippery in Marion at the intersection of Liberty Street and South Main Street on February 1.

SCDOT Photo

A State Highway Emergency Program worker assists a motorist stranded on I-95 on February 1.

SCDOT Photo

Storm Photos

A motorist carefully travels on snow-covered U. S. Highway 21 Bypass in York County near Fort Mill.

SCDOT Photo

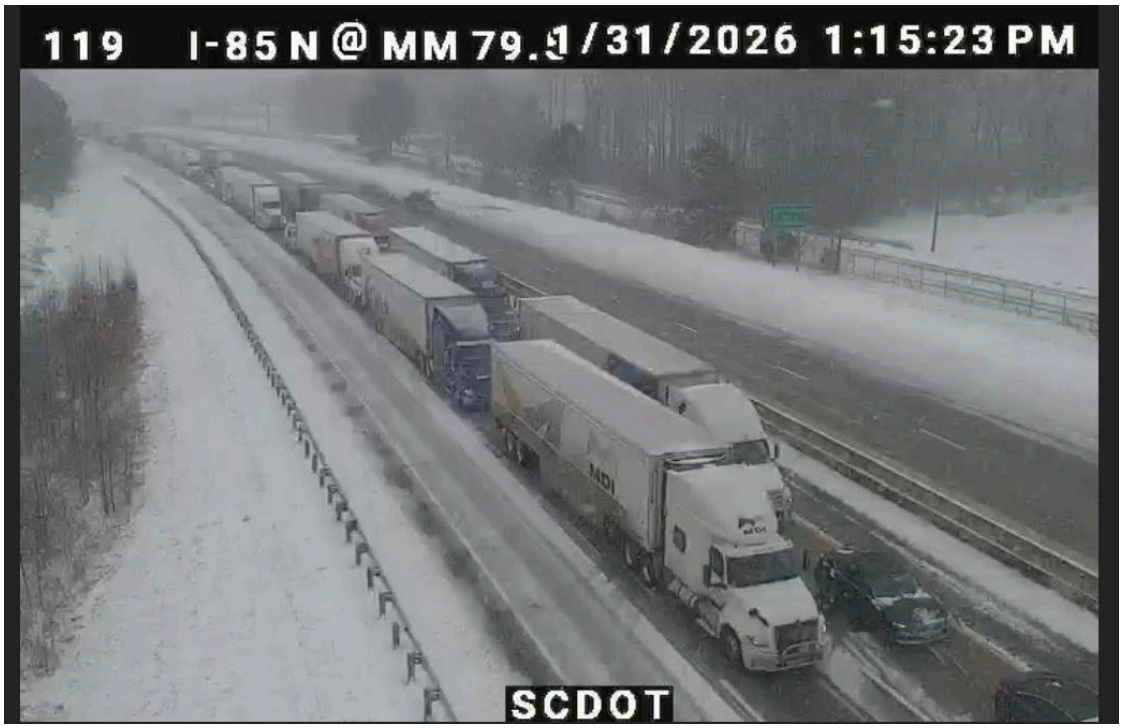
A few motorists challenged snow-covered and slippery U. S. Highway 21 (South Anderson Road) near Rock Hill on the morning of February 1.

SCDOT Photo

Storm Photos

The morning of February 1 brought slippery, snow-covered roads to Florence County, including this stretch of U. S. Highway 321 near its interchange with I-95.

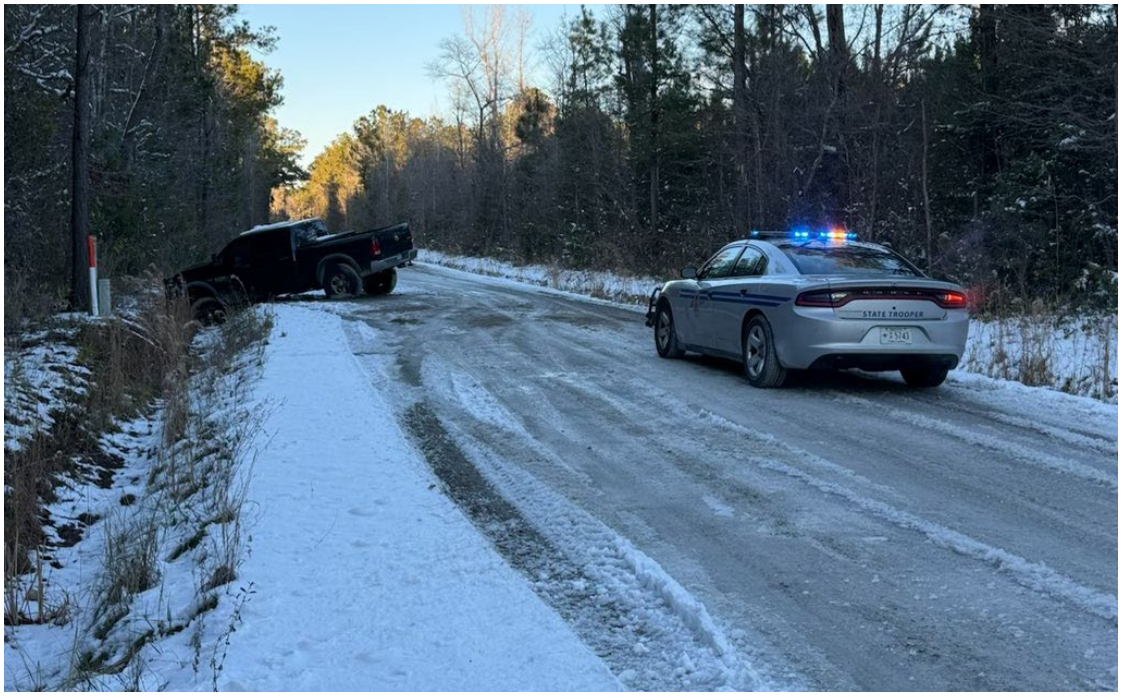
SCDOT Photo



Moderate snow reduced visibility and caused I-85 near Spartanburg to become slippery and snow-covered on the afternoon of January 31.

SCDOT Photo

Storm Photos



A South Carolina Highway Patrol trooper works to free a motorist who slid off icy Johnson Shelley Road near Conway on the afternoon of February 1.

SCDPS Photo

SCDPS officers watch over the State House on the evening of January 31.

SCDPS Photo