



South Carolina's Snowfall History and Climatology

Newspapers and personal journals provide accounts of some of the earliest snowstorms on record for the Palmetto state, dating back to the early 1700s. There are reports of snow in February 1726 and February 1773 in Charlestown (Charleston). In December 1775, it was reported that up to two feet of snow-blanketed portions of western South Carolina, and troops taking part in Revolutionary War campaigns marched in snow for about a week through the region. Later, in February 1899, The Great Arctic Outbreak caused measurable snowfall totals across the entire state, with as much as two to three inches accumulation in Beaufort and Jasper counties. More recently, five to eight inches of snow fell in the Coastal Plain in January 2018. And just last year (2022), parts of the state experienced three separate winter weather events during January, including Columbia, which broke its snow drought, ending the streak of 1,839 days without measurable snow.

On average, the Upstate region of the state usually experiences two or three winter storms per winter season. At the same time, it may be a couple of years between winter weather events in the coastal plain. The average annual snowfall ranges from a tenth of an inch in the Midlands to more than five inches of snow at the state's highest elevations.

Most of the winter weather events observed in the state occurred from late November to early March. But that's not always the case. On November 1, 2014, parts of the Upstate and the western Midlands were surprised to receive snow, up to five inches in Lexington County. One of the latest snowfall events in the state happened on May 7, 1992, when one to three inches of snow fell across the mountains. The snowiest winter on record in the state is the winter of 1968 – 1969, when the station at Caesars Head measured a seasonal snow total of 60.3 inches; with 15.5 inches in November 1968, and 0.9 inches and 33.9 inches in January and February 1969.

When it does snow, accumulations rarely remain on the ground for extended periods. However, back in December 1989, snow fell across the eastern half of the state and, thanks to cold temperatures, the white stuff managed to linger through Christmas morning — making it the only White Christmas on record for the state.

WHITE OUT!

The Snowfall of 1973

BY MELISSA GRIFFIN, ASSISTANT STATE CLIMATOLOGIST
AND FRANK STRAIT, SEVERE WEATHER LIAISON

Snow. This four-letter word sends us scurrying to the grocery store to stand in line for bread, milk and eggs. Some view frozen precipitation as an inconvenience, while others revel in the joy of making snow angels at midnight. Although South Carolina is not traditionally known for cold weather, Old Man Winter has occasionally graced the state with a rare visit.

Because of their rarity here in the Palmetto State, winter weather events tend to be highly impactful situations when they do occur. One of the most powerful winter weather events on record for the state was the Great Southeast Snowstorm of 1973. Since it's been fifty years since this storm brought portions of the Palmetto State to a standstill, let's look back at this memorable event.

The Storm

The first week of February 1973 was rather pleasant across the state; high temperatures were in the mid-60s to lower 70s, with overnight temperatures in the 40s. Things dramatically changed when a cold front brought cold Arctic air into the Southeast late on February 8. In the Charleston area, the high on February 8 was 70 degrees, but the temperature dropped to 37 degrees by the morning of February 9. Temperatures struggled to climb out of the 40s, setting up the event, as a low-pressure system developed in the Gulf of Mexico on the morning of February 9. A forecast published in *The State* newspaper called for cold temperatures, but only a low chance of precipitation, with no mention of an impending snowstorm.

As the storm approached the area, the precipitation started as rain but quickly transitioned to a wintry mix. Snow began to spread across Georgia, South Carolina and North Carolina from late February 9 through mid-day on February 10, as the storm system moved across the Florida peninsula and into the Atlantic. By the morning of the 10th, the storm quickly strengthened, dragging colder air into the region and providing more moisture to create intense snowfall rates, especially across central South Carolina. This is the ideal setup and storm track to produce a snowstorm in South Carolina.

The Snow

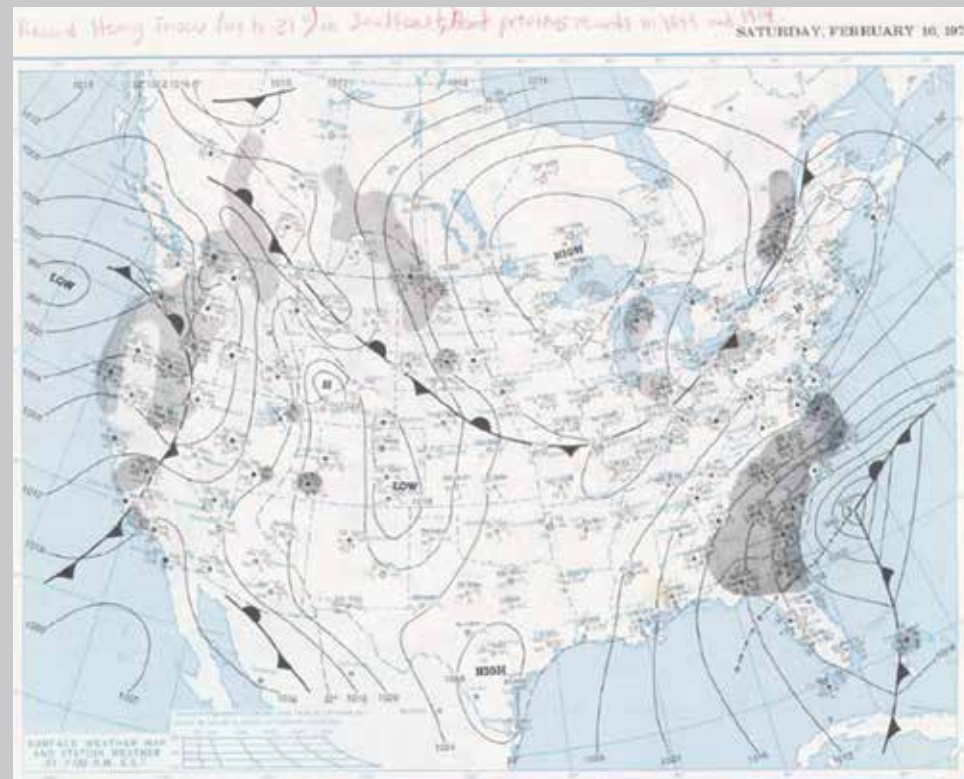
While snow is often associated with the higher elevations of the Upstate, one of the most interesting facts about this event is that little to no snow fell north of a line from Anderson to Gaston Shoals. Because the center of the storm was considerably

further off the coast than most storms that produce snow across the state, six northwestern counties were nearly snow-free, with no snow reported in Oconee and Pickens counties.

The most significant totals fell along the Interstate 95 corridor, with a maximum event total of twenty-four inches of snow measured in Rimini. Ten South Carolina counties reported event snowfall totals surpassing sixteen inches, and coastal communities and beaches were covered with three to seven inches of snow. Due to strong winds accompanying the storm, snow drifts piled more than four feet in

nearly double the old daily record of 3.9 inches set in 1899. The annual and monthly records stood until 1989, when 8.0 inches of snow fell between December 22 through 24. In Columbia, the event total of sixteen inches set new monthly and annual snowfall records for the location, breaking records from February 1899.

Lightning, thunder and strong winds accompanied the snow at the height of the storm on the morning of February 10. The winds gusted to 40 mph in Florence and 36 mph in Columbia, creating white-out conditions across portions of the Midlands. This storm accomplished an exceedingly rare



height could be found in central portions of the state. The South Carolina statehouse grounds were covered with more than fourteen inches of snow.

The previous statewide record for a February snowfall in South Carolina was 21.8 inches in 1969 at the station in Caesars Head. Outside the mountains, the previous record was 18 inches at Smiths Mill in 1912 and Society Hill in 1914. The station at Charleston set a new daily, monthly and annual snowfall record during the event with a total of 7.1 inches of snow,



feat for South Carolina — recording actual blizzard conditions at the Florence Regional Airport when heavy snow was reported with winds frequently gusting to at least 35 mph for three or more consecutive hours.

The Impact

The snowfall amounts were so high that they overwhelmed the small arsenal of snow removal equipment in parts of Alabama, Georgia and the Carolinas. Those traveling along the state's highways and Interstates were stranded, abandoning their vehicles to take refuge in nearby hotels. When no rooms were left in hotels, local churches, schools and families opened their doors to take in travelers who had to wait until their vehicles were dug out and the highways reopened two to four days later. Local farmers readied tractors to reach Interstate 95 from Florence to Walterboro to help trapped tourists. The South Carolina National Guard used high water and emergency vehicles equipped with chains to reach communities completely cut off by the snow. Helicopters from Shaw Air Force Base and McEntire Air National Guard Base were used to collect stranded motorists. The State Civil Defense Agency stated that more than 16,000 people were being housed in public shelters, and an unknown number of people found accommodations in hotels and private homes.

The storm produced little freezing rain; however, heavy snow downed trees and powerlines and caused the roofs of some buildings to buckle under its heavy weight. Parts of the state were without heat and water as temperatures dropped into the single digits, as another cold front delivered a reinforcing blast of frigid air into the region. Despite bright sunshine melting some of the snow on Sunday, record low temperatures turned the slush into ice. It wasn't until Tuesday, February 13, when temperatures climbed into the 40s, that the snow began to melt, and the State Civil Defense Agency noted that most of the roads were able to be cleared and reopened.

Because of the hazardous conditions created by the snow, Governor John West declared, by Executive Order, that some counties would be "dry" while the state of

Winter Weather Preparation

Like preparing for hurricane season, the best time to prepare for a winter storm is before it occurs. If you have not taken action to prepare, here are some tips to help you get started.

- Assemble a disaster supply kit, including food and water for each person in your household for three days.
- Make sure to fill any prescriptions and keep extra cash on hand.
- Be prepared to be without power and heat for several days.
- Take time to trim weak or damaged tree branches away from your home.
- Take pictures and videos of your valuables to detail them for insurance purposes, and make sure to keep your



- important documents together for quick access.
- Write down your plan. Doing so will help you avoid mistakes and quickly enact your plan in the event of an emergency.

emergency was in effect. Governor West requested that thirty-one South Carolina counties be declared federal disaster areas. The estimated cost of property damage, snow removal and rescue operations was nearly \$30 million (about \$220 million in 2022).

Volunteers with the National Weather Service noted some of the local impacts of the storm on their monthly weather observation forms: "On February 9, sleet and frozen rain. On February 10, glaze, thunder and winds up to 55 mph on the coast." – Baruch Institute, Georgetown.

"Snow and sleet totaled 17 inches. Some remained in shaded areas to February 23." – J. Etheredge, Blackville.

"Couldn't make it to the river gauge from February 10 – February 14 due to deep snow blocking roads." – F. Ackerman, Givhans Ferry.

"Observation missing due to heaviest snowfall in about a century blocking roads to transportation." – C. Guerry, Jamestown.

"Thunder 3:30 AM, Fourteen to twenty inch drifts." – M. Jayroe, Little Mountain.

"On February 11, had snow drifts from 2.5 to 5 feet. Would have lost cattle had it not been for heavy tractors and terrace blade." – N. Kneece, Pelion.

"Snow very dry; lightning, deep drifts, and strong winds." – W. Culp, Winthrop College.

Despite the snow falling outside the growing season, the agricultural industry reported some damages, including \$3 million (\$20 million, 2022) in poultry losses, mainly due to collapsed chicken houses. Some crop commodities stored in warehouses were lost due to roof damage, leaks and power outages. Wet fields prevented late harvests of soybeans and cotton and stopped all field preparation activities for the spring. It took weeks after the storm to repair the damage done by the storm in the Pee Dee area. Damage to timber was not as significant due to the short duration of freezing rain observed across the state.

Now, you may be wondering about impactful ice storms that have crippled the state; however, that's an entirely different story.

Visit dnr.sc.gov/climate/sco/ to learn more about the South Carolina State Climatology Office.