

Southern Plains New Year's Winter Storm
December 30, 2020 - January 1, 2021
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Meteorological Overview:

This New Year's Eve (2020) to New Year's Day (2021) winter storm formed out of a mutual interaction between a slow-moving front across the Deep South and an upper-level low exiting out of northern Mexico on New Year's Eve. The event began with snow overspreading southwestern Texas ahead of the advancing upper-level low as a surface low pressure center began to develop along a coastal front over southern Texas early on New Year's Eve. The storm system then steadily intensified and quickly moved north- and northeastward across Texas and into the mid-section of the country through New Year's Day, producing a swath of 6 to 12 inches of snow from southwestern Texas to west-central Oklahoma. The low pressure system reached peak intensity later on New Year's Eve as the sea-level pressure near the center dropped to a minimum of about 1000 mb over eastern Texas. The entire system then gradually weakened with time as additional snowfall along with freezing rain spread farther north and east across the Midwest, the Great Lakes, and the interior Northeast for the next couple of days.

Impacts:

This storm impacted areas in Texas and Oklahoma that do not usually see heavy snowfall. When the storm ended, 6 to 12 inches of snow with locally higher amounts had accumulated across southwestern Texas, with a secondary maximum across west-central Oklahoma. Up to 13.5 inches of heavy snow fell near Big Spring in western Texas. Big Bend National Park reported 12 to 18 inches of snow on New Year's Eve, making roads impassable. Meanwhile, vehicles were stranded on nearby interstates due to the heavy snow. Snow and sleet also fell to the west and northwest of Austin, TX, which created dangerous driving conditions along a 300-mile stretch of I-10. Farther north, 6 to locally 12 inches of heavy snow fell near Oklahoma City while 4 to 7 inches fell near Wichita, Kansas. The 5.1 inches of snow measured at Will Rogers World Airport in Oklahoma City was enough to establish a new daily snowfall record for New Year's Day, breaking the old record of 3.0 inches set in 1895. Average January snowfall for Oklahoma City is just under 3 inches. In addition, significant amounts of freezing rain fell preceding the snow over parts of the city and southeastward to the vicinity of Norman, OK. Ice accretion on trees and power lines resulted in power outages for thousands of residents. There were also numerous reports of cars skidding off the roads due to the combination of heavy snow and ice across the region.