



MIAMI-SOUTH FLORIDA

National Weather Service
Forecast Office

<http://www.weather.gov/miami>

40th Anniversary of Snow in South Florida



Picture Courtesy of Charles Trainor/Miami Herald

On January 19th, 1977, snow fell in South Florida for the first time in recorded history. Residents and visitors were both surprised and thrilled at the rare phenomena, and local newspapers ran headlines which were nearly as big as it would be for major national or

world events. News of President Jimmy Carter's inauguration was pushed out of the headlines. Snow was seen across all of Southeast Florida as far south as Homestead and even on Miami Beach. Snow was officially reported by weather observers in West Palm Beach, LaBelle, Hollywood, and Royal Palm Ranger Station in deep South Miami-Dade County. Reports of snow mixed with rain were even received from the Bahamas in Freeport on the other side of the Gulf Stream from Southeast Florida.

Although snow in Florida is not as rare as it is believed to be, the farthest south snow had been previously observed was along a Fort Myers to Fort Pierce line in February 1899.

The snow came on the heels of a strong Arctic cold front which moved rapidly down the Florida peninsula from late on January 18th through the pre-dawn hours of January 19th. A strong arctic high pressure area settled over the lower Mississippi Valley and pumped very cold air into Florida (Figure 1). At the same time, a band of clouds and of precipitation associated with an upper level trough (Figure 2) followed the passage of the arctic front, and every reporting station in north and central Florida recorded at least a trace of snow. Tampa measured .20 inches and Plant City, east of Tampa, measured up to 2 inches of the white stuff. West Palm Beach reported its first snowfall on record at 6:10 AM and continued to report light snow through 8 AM. LaBelle also reported snow in their cooperative observation report submitted the morning of January 19th.

Rain began to mix with snow over areas farther south, and eventually fell as snow flurries across Broward and Miami-Dade counties between 8 and 9:30 AM. Miami International Airport, the official weather reporting site for Miami, did not observe the snowfall. However, cooperative stations in Hollywood and Royal Palm Ranger Station in far southern Miami-Dade County reported a trace of snow. As a result of this and the widespread eyewitness reports of snowfall, an asterisk is included in the official precipitation records for Miami to indicate the widespread reports of snow on the morning of January 19th.

WEDNESDAY, JANUARY 19, 1977

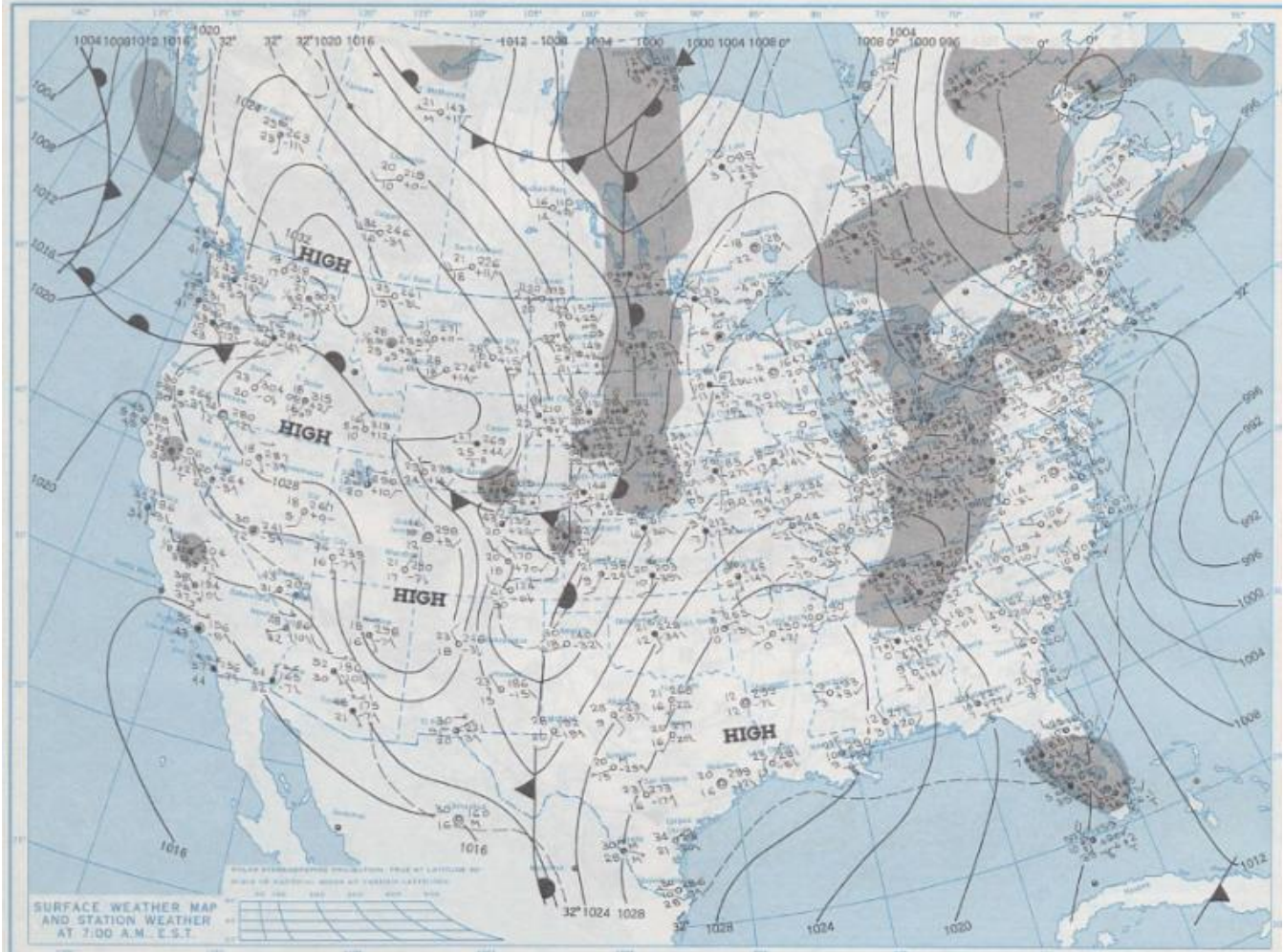


Figure 1: Weather Map at 7 AM EST on January 19th, 1977. Arctic high pressure of about 1030 mb centered over Louisiana and Texas represented the heart of the frigid air mass over the United States, with northwest wind flow down the Florida peninsula

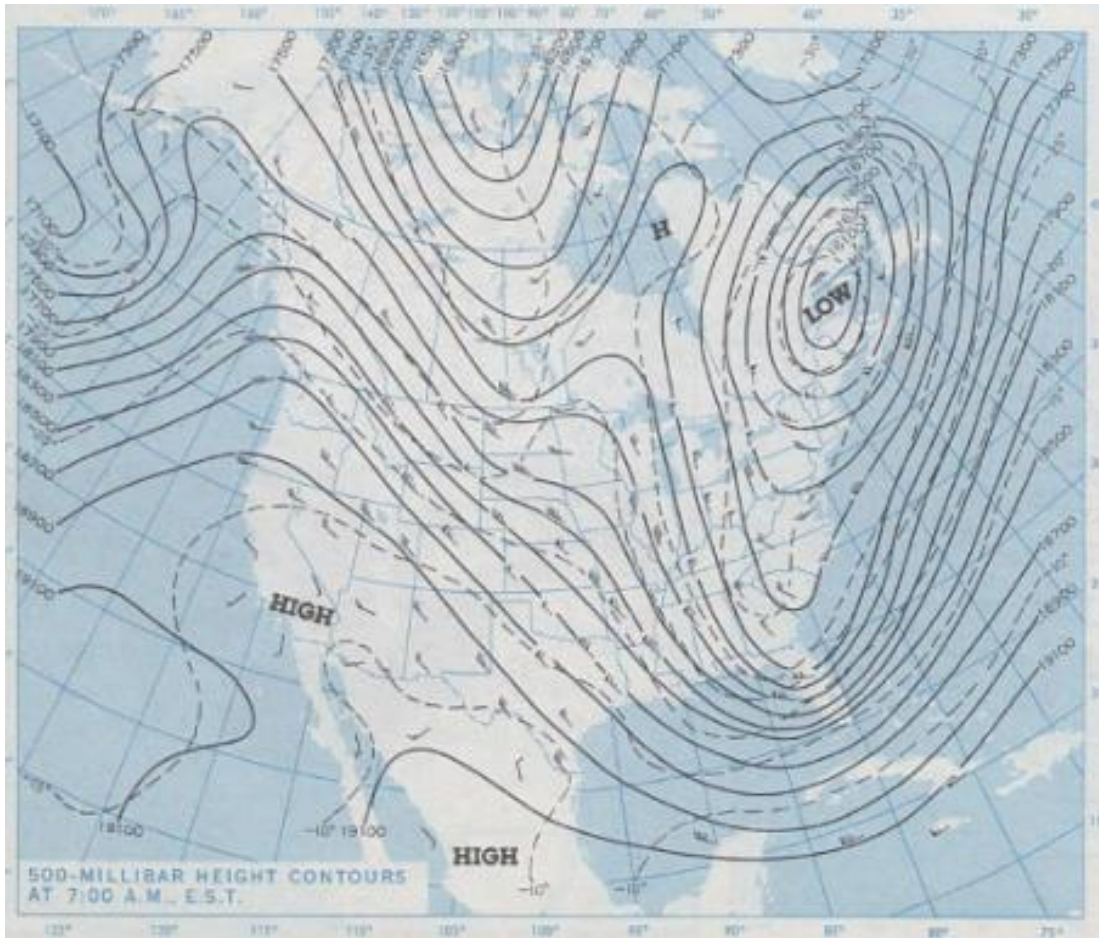


Figure 2: 500 millibar (mid-troposphere) map at 7 AM on January 19th, 1977 showing a strong low pressure trough over Florida

It is interesting to note that although air temperatures were slightly above freezing when the snow fell, the freezing level on the morning of the 19th was at only 1,500 feet above sea level which is at a very low altitude for South Florida. This prevented the precipitation from completely melting before reaching the ground.

The snow occurred during a prolonged period of very cold temperatures in South Florida. The first arctic front moved through the region late on the afternoon of January 16th with temperatures failing to reach the 60 degree mark in Miami for four consecutive days from January 17th to the 20th. The coldest air and snow arrived with the second arctic front on the 19th, with the afternoon high only reaching the mid to upper 40s. Miami's afternoon high of 47 degrees that day stands as the 2nd coldest afternoon high on record.

The most significant impact of the frigid air was felt on the night of the 19th and morning of the 20th when winds decreased, causing temperatures to plummet to at or below

freezing virtually everywhere in South Florida, including 27 degrees at the southern tip of the Florida peninsula in Flamingo. Four locations in South Florida tied or set their all-time recorded low temperature, records which stand to this day. Here are some of the low temperatures recorded across South Florida on the morning of January 20th:

LOCATION	LOW TEMPERATURE (F) JANUARY 20TH, 1977
LABELLE	21
DEVILS GARDEN	23
HOMESTEAD AGR. CENTER	23
IMMOKALEE	24
BELLE GLADE	24
ROYAL PALM RANGER STN	24 *
MOORE HAVEN	25
NORTH MIAMI BEACH	25
NAPLES	26 *
PALM BEACH INT'L AIRPORT	27
CLEWISTON	27
FLAMINGO	27
FORT LAUDERDALE	28 *
HOLLYWOOD	28
MIAMI INT'L AIRPORT	31
MIAMI BEACH	32 *

* Indicates all-time low temperature record at that location

Temperatures over interior and western sections of South Florida were at or below freezing for 10 to 14 hours, and some locations were at or below 28 degrees for 4 to 8

hours. The extended duration of freezing temperatures devastated the agricultural community in South Florida with estimated losses of \$350 million statewide and over \$100 million in Dade County alone. Skinned fruit such as tangerines, tangelos and temple oranges were almost totally destroyed, as were tender vegetables such as beans, corn, tomatoes and squash. A total of 35 counties in Florida were declared disaster areas.

Sprinkles ran all night at most farms and nurseries, and some of the water also got on to some roadways, causing ice to form on some western Miami-Dade County roads and causing the Florida Highway Patrol to issue travelers advisories for ice-covered roads.

Could snow fall again in South Florida? History has already shown us that it can, and if it's happened once, it can definitely happen again someday. In fact, there were unconfirmed reports of snow mixing with rain in South Florida on January 9th, 2010 from a very similar weather pattern as the one that occurred 40 years ago.

This article includes information from the original report written by Glenn E. Schwartz who worked at the National Hurricane Center in 1977.