

January 2003 Summary

From Feast to Famine: Dry, Cool January Follows December's Soaking



Ice coating applied to citrus crops in Polk County.

After a very wet December, January 2003 did an about-face, with scarce rainfall across much of the Suncoast. Rainfall was near normal in Fort Myers, but most of it fell early New Year's Day. One trend that continued, however, was below normal temperatures. This trend, which began in late November, bottomed out in January. This unusual month saw both top ten dry and top ten chill at many locations on the Suncoast. Tables 1 and 2 show the top ten driest and top ten coldest Januaries for Tampa, respectively.

January's Trends

Waves of cool air, courtesy of frequent polar fronts, dominated the month. The fronts were associated with a persistent eastern North American low pressure area at mid and upper levels of the atmosphere. This pattern rarely allowed a southerly flow of warm, moist air, eliminating most precipitation. The first front brought brisk northwest winds and daytime temperatures in the 50s to lower 60s on the 3rd. Four days later, another front produced a similar result. Fair weather, with daytime temperatures in the 60s, was noted through mid month.

The peak of the cold air would be felt between the 18th and 25th. Modified arctic air would invade the state on the 18th and 19th, with daytime temperatures struggling into the 50s across most areas. Temperatures rebounded towards normal by the 22nd, before the bottom fell out on the 24th.

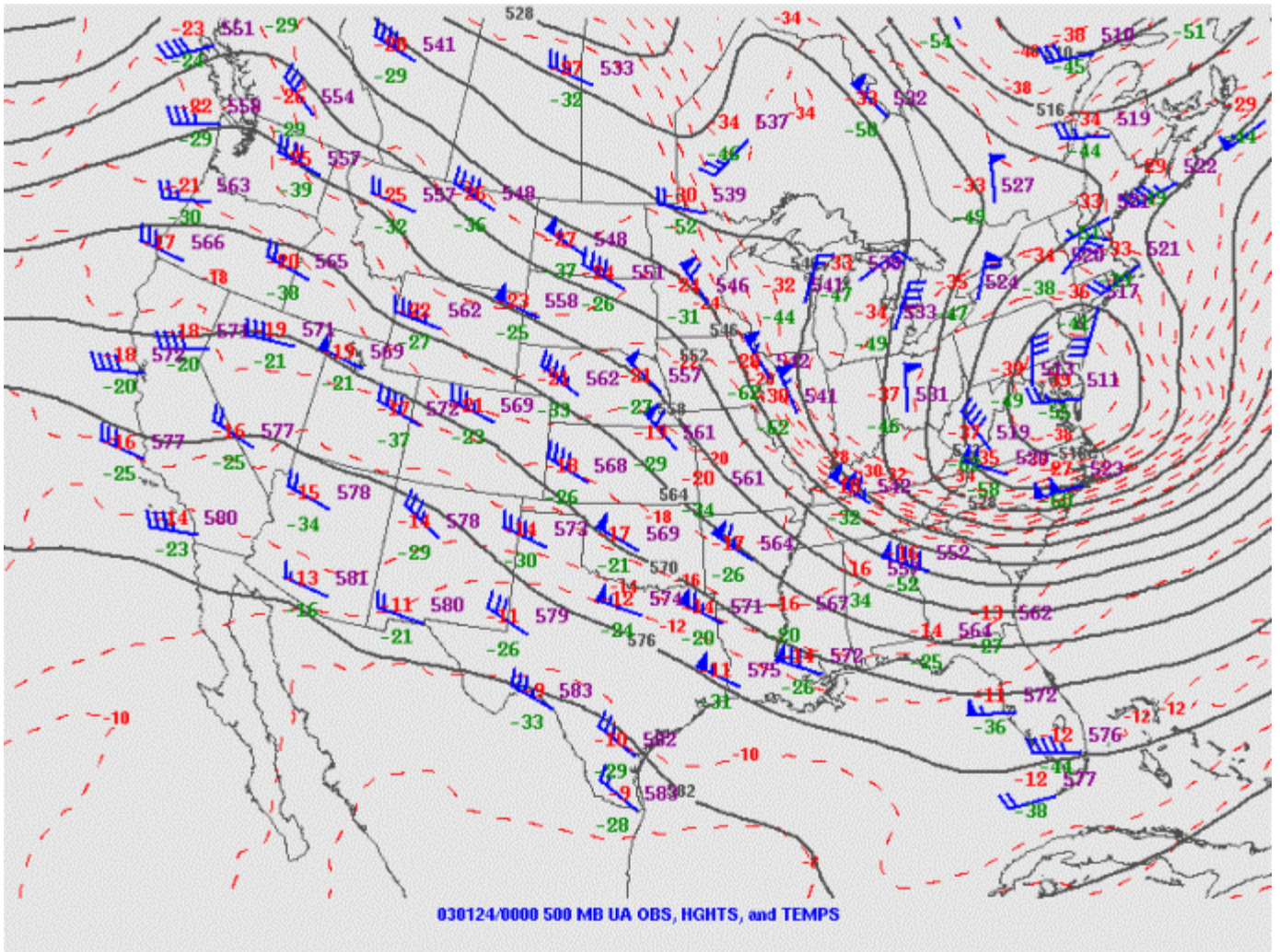
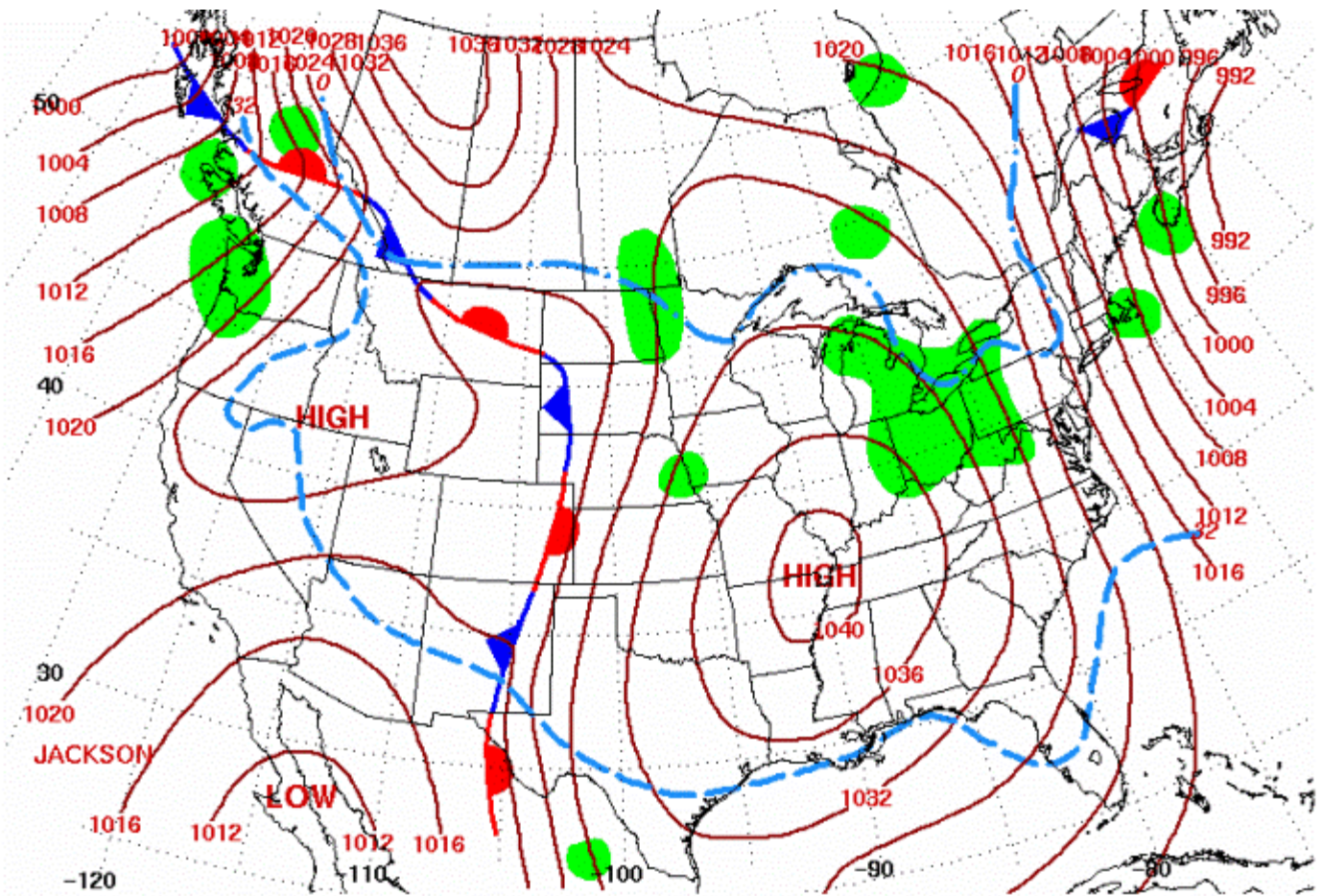


Figure 1. 500 mb chart, 00 UTC January 24th.
 Note the closed vortex along the Virginia Coast,
 and strong northwesterly flow to it's south.



Surface Weather Map at 7:00 A.M. E.S.T.

Figure 2. Surface chart, 12 UTC, January 24th.
 Note position and strength of high pressure area along the Mississippi River near Memphis.

Table 1.		
Top 10 driest Januaries in Tampa, since 1891.		
RANK	RAINFALL	YEAR
1	Trace	1950
2	0.08	1927
3	0.11	2003
4	0.17	1974
5	0.18	1949
6	0.26	1932
7	0.28	1902
8	0.29	1916
9	0.34	1895
10	0.35	1943

Table 2.		
Top 10 coldest Januaries in Tampa, since 1891.		
RANK	AV. TEMP	YEAR
1	50.4	1981
2	51.2	1977
3	52.0	1940
4	53.3	1958
5	54.0	1970
6	54.8	2003
7	55.0	1978
7	55.0	1893
9	55.2	2001
9	55.2	1905

The 24th...and Other Freezes

The coldest statewide temperatures since 1996 arrived on the heels of a true arctic front. A powerful vortex of upper level energy developing off the North Carolina Coast (Figure 1) allowed strong surface high pressure to build across the southern U.S. (Figure 2). The storm system, which produced record snows along North Carolina's Outer Banks, allowed arctic air to penetrate Florida. By daybreak, readings were at or below freezing across all but the immediate coastline. Coupled with the low temperatures were icy wind chills which ranged from near 10 well north of Tampa Bay to the low and mid 20s near Fort Myers.

Conditions gradually recovered thereafter, rising above normal for the last two days of the month. January tabular climate reports for Tampa and Fort Myers show the trends.

Freezes became practically routine north of Tampa Bay in January. Some portion of the Suncoast between Levy and Lee county had temperatures at or below 32 degrees for several hours on 12 occasions. Nine of those occurred in the last half of the month! Despite the frequent freezes, there were no killing freezes, and, as of this writing, most agricultural crops survived.

Table 3 details each freeze.

Table 3. January 2003 Suncoast Freezes (preliminary)			
#	Date	Freeze	Hard Freeze
1	1/4/03	Levy, Citrus, Sumter	None
2	1/5/03	Levy, Citrus, Sumter, Hernando, N. Pasco	None
3	1/7/03	Levy, Citrus, N. Sumter	None
4	1/8/03	Levy, Citrus, Sumter, Hernando, Pasco	Citrus, W. Sumter, Hernando
5	1/16/03	Citrus, W. Sumter, Hernando	None
6	1/18/03	Levy, Citrus, Sumter, Hernando, Pasco, Hillsborough, Polk, W Highlands, Hardee, E. Manatee, N. Desoto	Levy, Citrus, W. Sumter, Hernando, N. Pasco
7	1/19/03	Levy, Citrus, Sumter, Hernando, Pasco, E. Hillsborough, E. Manatee, S.E. Sarasota, W. Polk, W. Highlands, Hardee, Desoto	Levy, Citrus, Sumter, Hernando, Pasco
8	1/20/03	Levy, Citrus, Sumter, Hernando, Pasco	None
9	1/24/03	All Counties	Levy, Citrus, Sumter, Hernando, Pasco, N. Polk, E. Hillsborough
10	1/25/03	Levy, Citrus, Sumter, Hernando, Pasco, E. Hillsborough, W. Polk, N. Hardee	Levy, Citrus, Sumter, Hernando
11	1/26/03	Levy	None
12	1/28/03	Levy, Citrus, Sumter, Hernando, Pasco	None