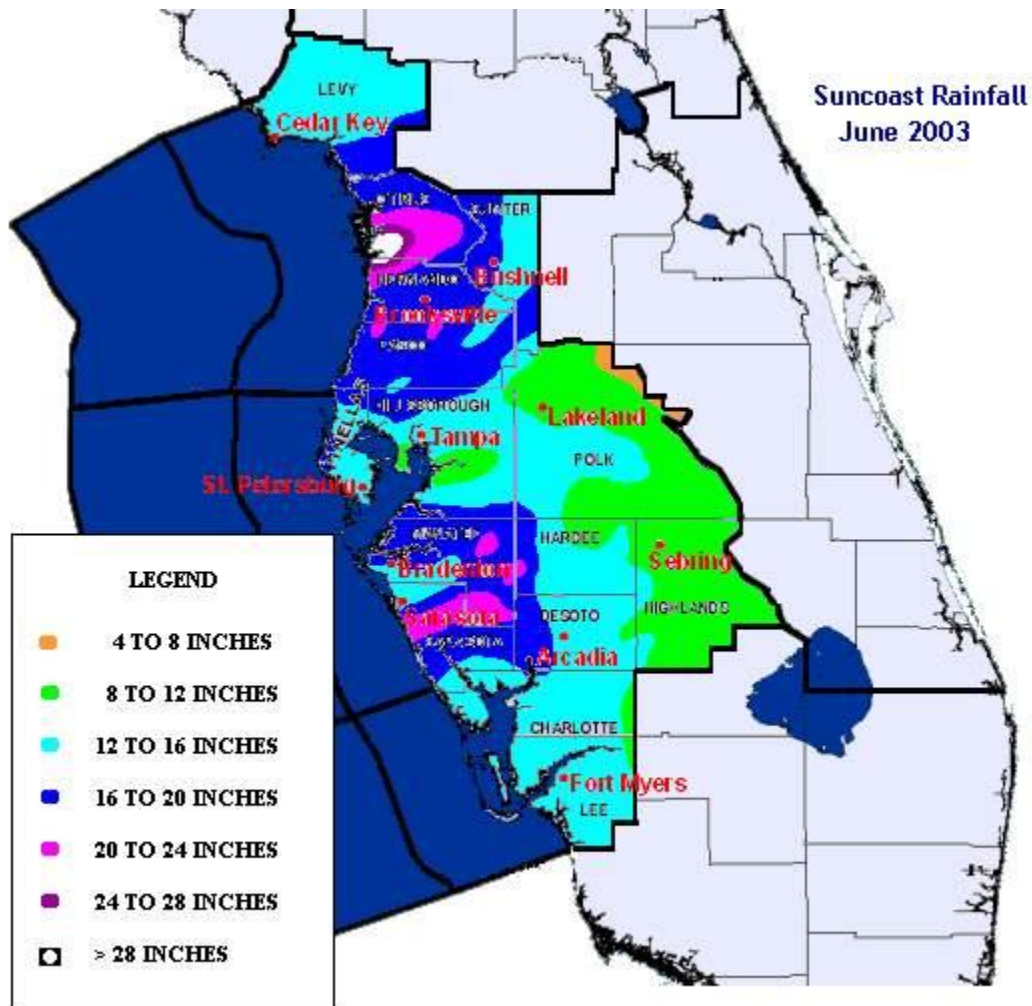


# June 2003 Summary

## Heavy Rains Produce Record River Flooding



Spill gates opened at Lake Manatee Dam, June 21, 2003.



June 2003 Rainfall for the Suncoast.

Summer's arrival was put on hold across much of the eastern United States, as repeated upper level disturbances locked in cloudy and cool air for most of June. This pattern was also responsible for a wet and rather gray month across the Suncoast, as the Bermuda High did not become established. Deep southwesterly

flow of tropical moisture combined with upper level energy to produce above normal rainfall in all areas, with the greatest departure across the coastal counties.

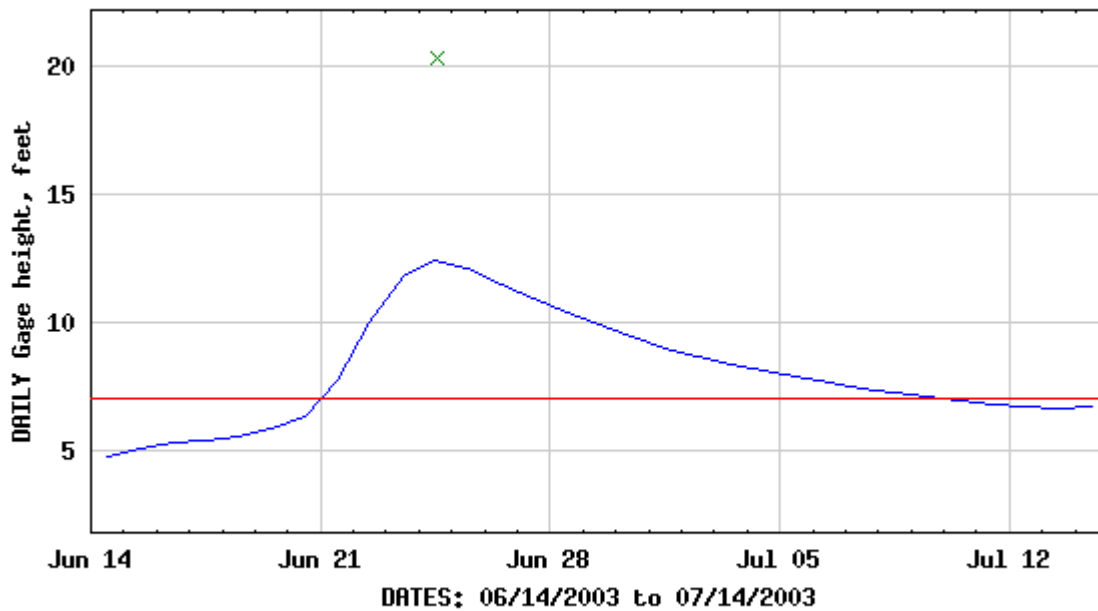
Locally tremendous rain totals resulted in major to record river flooding at several southwest Florida gage points. The widespread floodwaters took their toll on river shoreline residents, and damage is certain to run in the tens of millions of dollars by the time all information is assessed.

The month can be broken into two halves: June 1 through 15, or the "setup" period, when rainfall and humidity were slightly above normal, followed by June 16 through 30, the deluge. The repeated, widespread heavy rains fell between June 18th and 23rd (see box at right).

<b>Table 1.</b>		
Top 10 wettest Junes in Tampa, since 1890.		
RANK	RAINFALL	YEAR
1	18.52	1945
2	15.92	1934
3	13.75	1974
4	13.47	1912
5	13.42	1896
6	13.19	2003
7	12.54	1943
8	12.41	1892
9	12.18	1899
10	11.58	1890

<b>Table 2.</b>		
Top 10 wettest Junes in Fort Myers, since 1931.		
RANK	RAINFALL	YEAR
1	20.25	1936
2	20.10	1974
3	18.73	1992
4	17.92	1983
5	16.43	1939
6	16.10	1959
7	16.06	1943
8	15.03	1968
9	15.01	1982
10	14.60	2003

USGS 02298830 MYAKKA RIVER NEAR SARASOTA FL



EXPLANATION

— DAILY MEAN GAGE HEIGHT × MEASURED Gage height — Floodstage

Figure 5. USGS streamflow, Myakka River at Myakka Head, mid June through early July 2003.

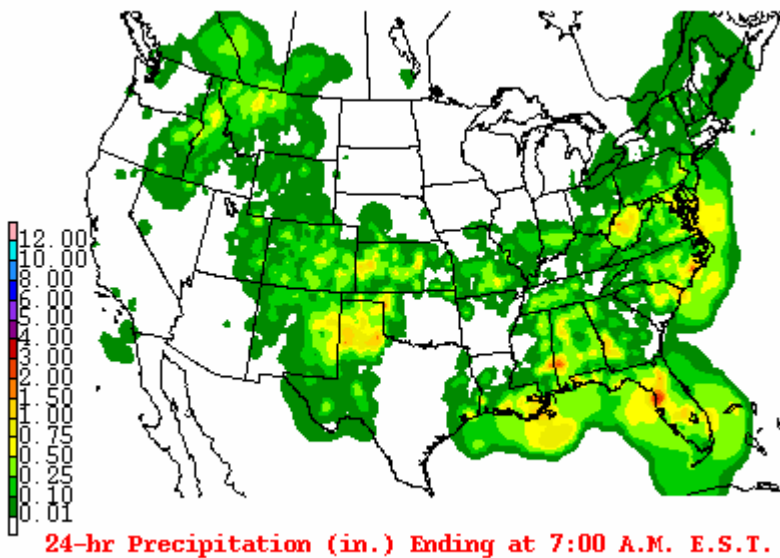
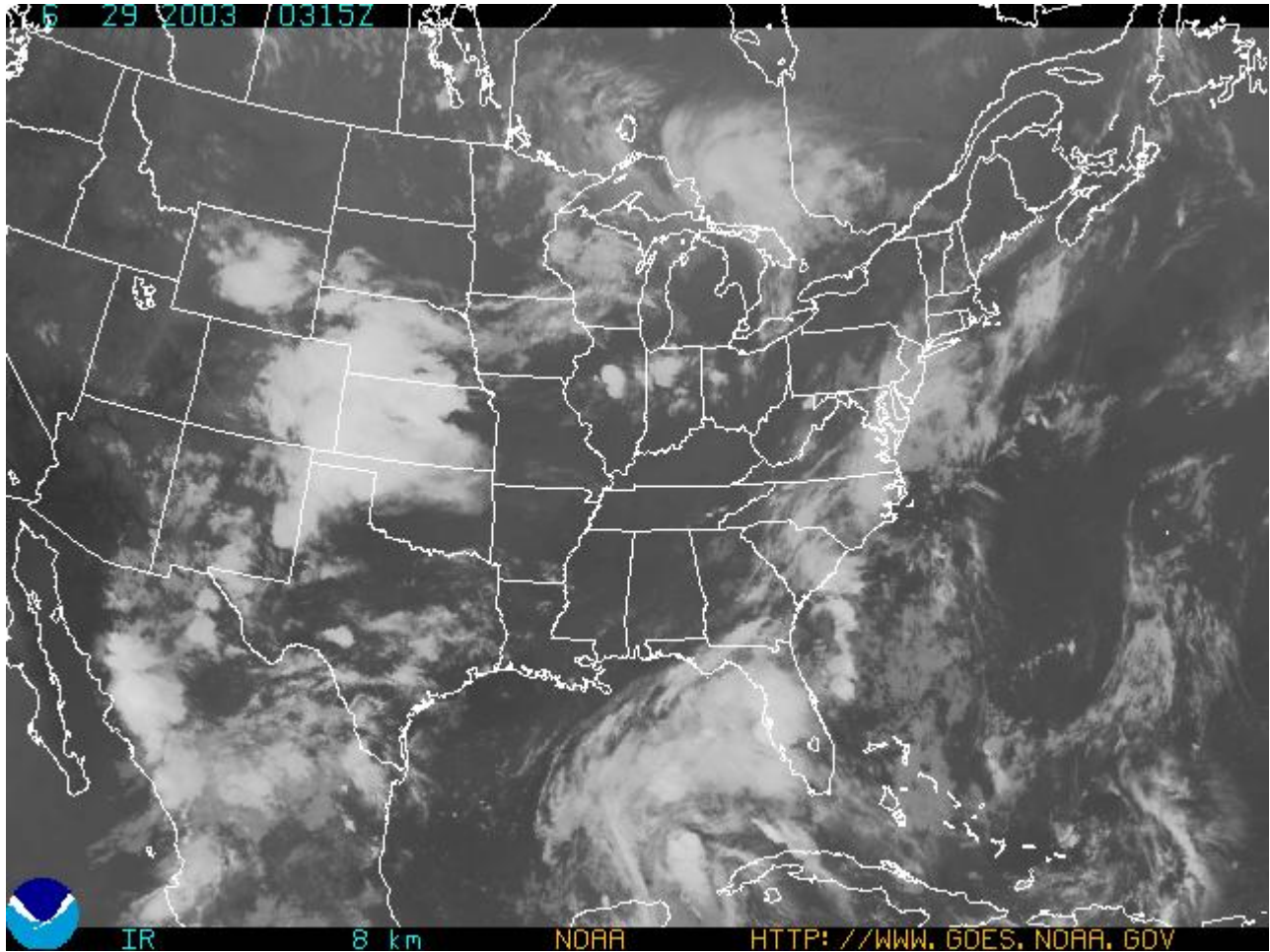


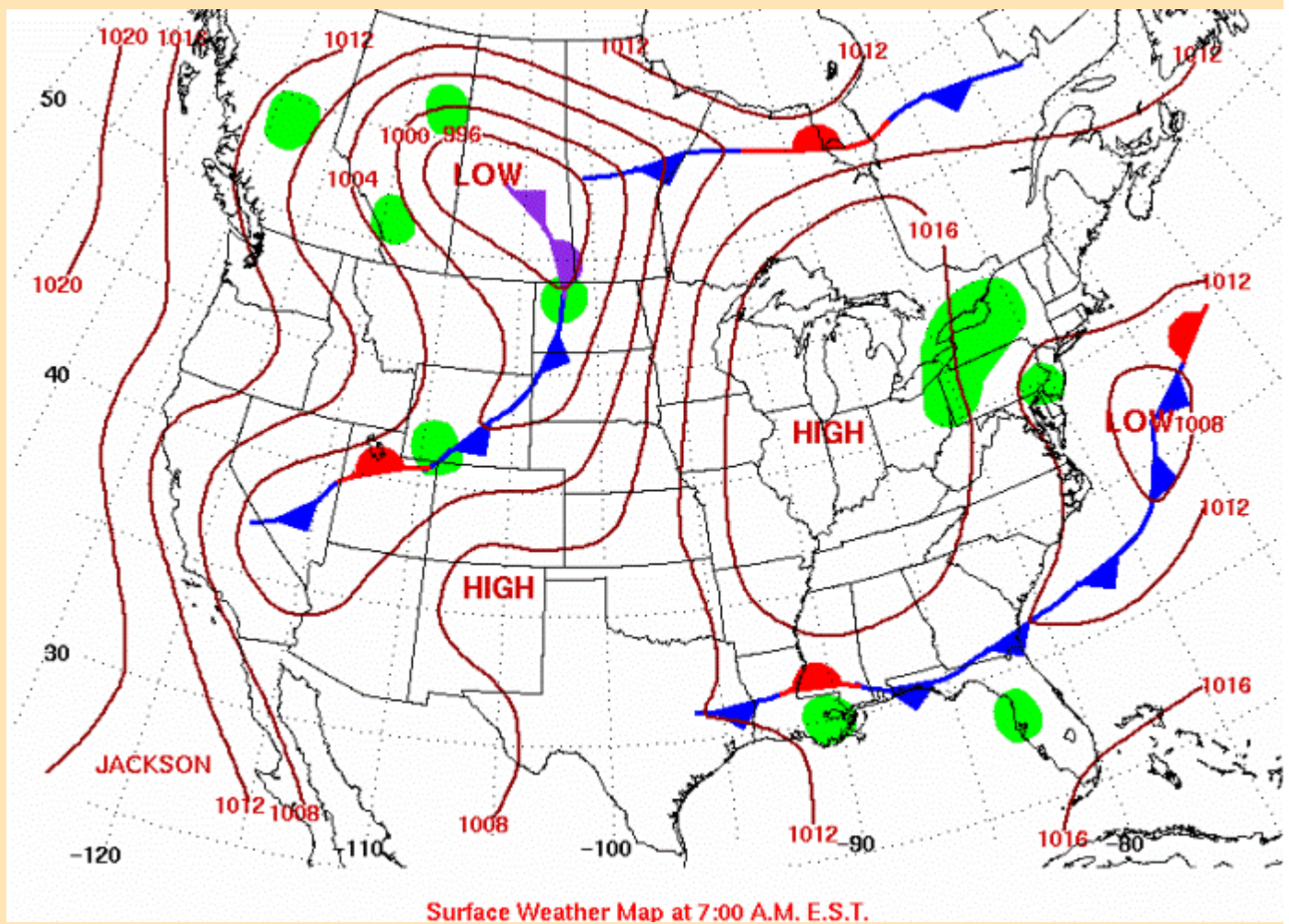
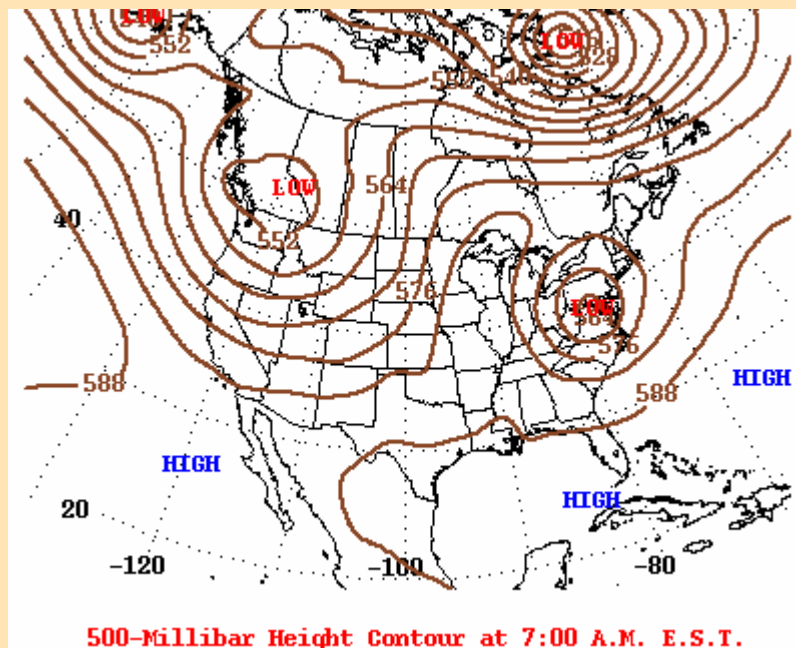
Figure 1. Measured and interpolated 24 hour rainfall ending at 7 AM June 20th. Note the high amounts (red shading) along Florida's suncoast (lower right).



*Figure 2.* GOES-East infrared photograph, 1115 PM EDT June 29th, 2003, showing a developing squall line moving onshore. This would be the last widespread rain episode of the month.

### **Needing an Ark: June 18 - 23**

An unusually strong 500 mb cyclone began developing in the upper midwest on the 18th, strengthening as it moved into the Northeast by the 21st (Figure 3). The system initially brought unseasonably cool air to much of the eastern U.S., courtesy of a Canadian high pressure ridge which slowly migrated through the Great Lakes region. The front which ushered in the cool air became stationary across south Georgia and Alabama, setting the stage for consecutive days of torrential daytime rains (Figure 4).



Figures 3 and 4. 500 mb plot 12Z June 21, 2003 (left);  
Surface chart for 12Z June 21, 2003.

Upper level disturbances riding the inflection between the suppressed 500 mb ridge, which extended from Cuba through the Bahamas, combined with the eastern U.S. trough, focused the precipitation across

Florida's Suncoast. Citrus County received the most rain, with more than 20 inches falling in some locations across the southern tier of the county. However, the greatest impact was felt across Southwest Florida's watershed.

A one-two punch of localized torrential rains on June 20 and 21 dropped between 10 and an estimated 15 inches at the mainstem of the Manatee and Myakka Rivers, unleashing record river flooding on each river soon after (Table 1, below). A spillover gate temporarily failed at Lake Manatee early on the 22nd, exacerbating flood conditions immediately downstream. Fortunately, the problem was fixed before major flooding could affect hundreds of downstream homes.

Such was not the case in Sarasota County, where at least 750 residences were affected for more than a week in North Port due to continued major flooding (Figure 5 at left) on the Myakka River. Freshwater flooding damaged 60 roads in Hardee County; at least five were washed out. Widespread sheet flow flooding was reported in Sarasota, Desoto, Charlotte, and Lee Counties, closing dozens of roads and flooding dozens of homes, some with more than 3 feet of water.

**Table 1:**Flood Stage Report as of June 30, 2003

River and Station	Flood Stage	Above Flood Stages (Dates)		Crest	
		From	To	Stage (Ft)	Date
Withlacoochee R. at Dunnellon	29	6/29	6/29	29.04	6/29
Anclote R. at Elfers	20	6/22	6/24	20.59	6/24
Cypress Cr. at Worthington Gardens	8	6/22	6/30*	9.20	6/27
Alafia R. at Lithia	13	6/21	6/27	17.56	6/23
Little Manatee R. at Wimauma	11	6/20	6/27	17.67	6/22
Horse Cr near Arcadia	12	6/21	6/30*	18.02	6/23
Myakka R. at Myakka State Park	7	6/21	6/30*	12.46	6/24
Manatee R. at Myakka Head	11	6/21	6/25	20.85	6/21
Manatee R. at Manatee Dam	41	6/20	6/22	42.42	6/22
Manatee R. at Rye Bridge	11	6/21	6/23	19.71	6/23
Peace R. at Bartow	8	6/24	6/25	8.32	6/25
Peace R. Zolfo Springs	16	6/22	6/28	17.71	6/25
Peace R. at Arcadia	11	6/22	6/30*	15.41	6/26

**Notes:**

Rows in green show all time record crests.

Row in cyan show 2nd highest crest and all time new dam crest.

\*Flooding continued into July.

## June 2003 Suncoast Flood Photos

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## Flood Photo Gallery

A few flood photographs from the period of June 18th through 23rd.



Hardee County Road Flooding - Photograph from Bill Muhfeld, Hardee County Director of Emergency Management.

**RB-1002 BRIDGES ROAD  
SHOWS 4X6FT BOX CULVERT FAILURE.**



Hardee County Road Washout - Photograph from Bill Muhlfeld, Hardee County Director of Emergency Management.





Minor freshwater flooding on Anna Maria Island - Photograph credit: Miles Doran.



Minor freshwater flooding on Anna Maria Island - Photograph credit: Miles Doran.