



NOAA, NATIONAL WEATHER SERVICE, WEATHER FORECAST OFFICE

Miami, Florida 33165

<http://weather.gov/southflorida>

Summary of Heavy Rainfall/Flood Event of October 28-31

Record October Rainfall at Miami Beach

November 1, 2011: High atmospheric moisture levels from the Caribbean and Gulf of Mexico in combination with a stalled frontal system led to periods of torrential rainfall and significant to severe flooding over large parts of southern Florida from Friday evening, October 28 through early Monday morning, October 31.

Mid and upper level moisture associated with the remnant of Hurricane Rina began to affect south Florida last Friday. At the same time, a cold front over north Florida was moving south and the convergence of these two weather features led to the development of heavy showers over northern metro Broward and southeastern metro Palm Beach counties from Tamarac to Lake Worth, as well as over the western half of Collier County as additional moisture moved in from the Gulf of Mexico. These showers produced 5-7 inches of rain in these areas over a period of less than 6 hours, causing significant street flooding but little in the way of structural flooding.

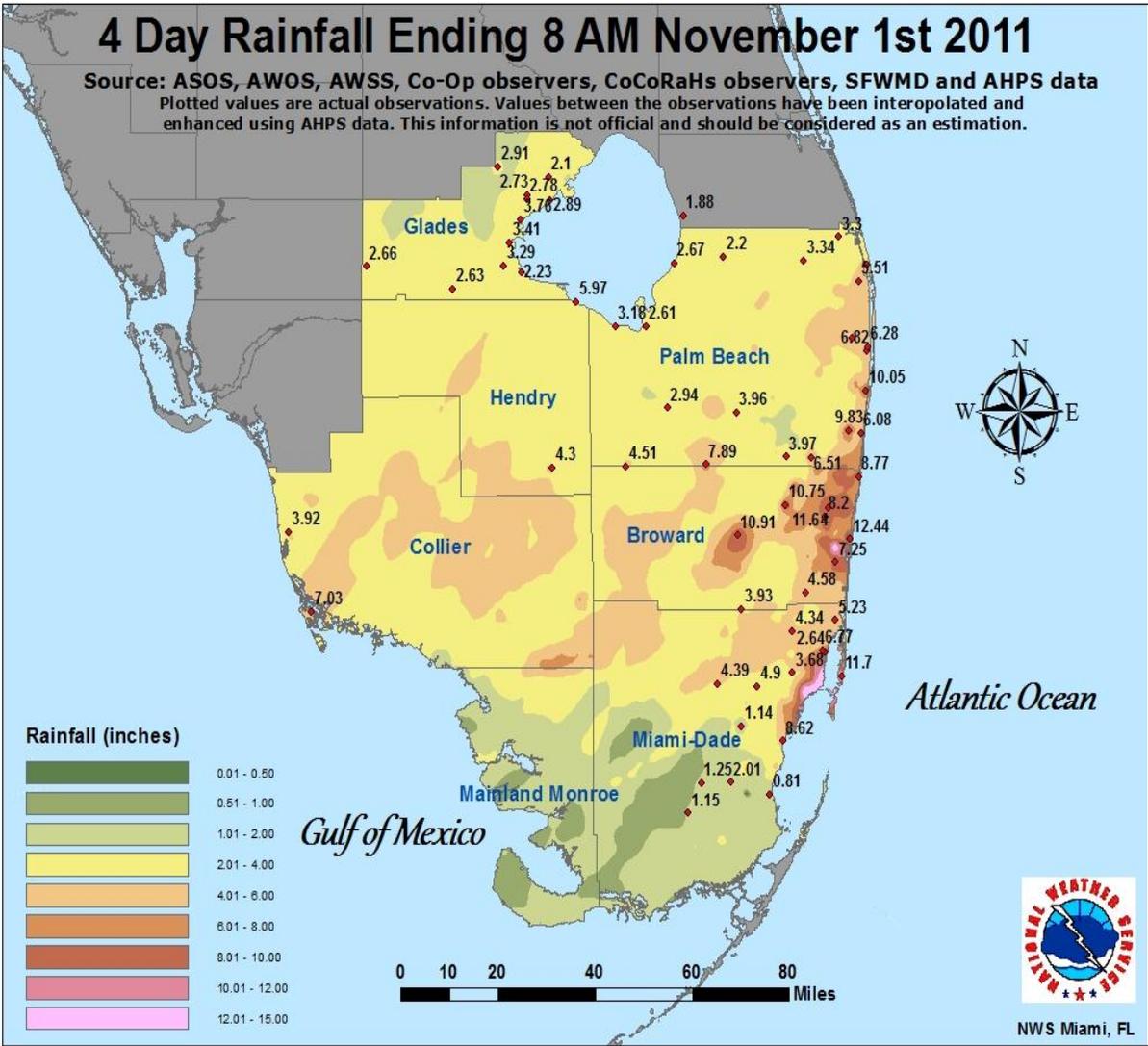
On Saturday, the cold front moved into south Florida with a temporary break in the rainfall during the early part of the day. However, as the front stalled over far south Florida late in the afternoon, bands of heavy rain developed over northern metro Miami-Dade County and eastern and northeastern metro Broward County, from Miami Beach and Doral north to the Pompano Beach area. In these areas, 3-7 inches of rain fell in only a few hours, once again resulting in significant street flooding.

The front remained nearly stationary over south Florida on Sunday, which eventually set the stage for the third and most significant rain event of the weekend. Clusters of heavy showers and thunderstorms developed over Biscayne Bay during the late afternoon and early evening

and drifted north over Key Biscayne and the southern Miami-Dade County communities of Cutler Bay and Palmetto Bay during the evening. By midnight, the area of heaviest showers and thunderstorms was over Pinecrest, Coral Gables and Coconut Grove and remained over that area for another few hours. This area of rainfall produced anywhere from 6 to 10 inches of rain in only a few hours from Cutler Bay to Coconut Grove, leading to severe street flooding and intrusion of water into dozens of homes across this area. Estimates from the South Florida Water Management District indicate that isolated areas in Coconut Grove may have received in excess of 12 inches during this time span.

While the rains over Miami-Dade County were ongoing during the late evening of Sunday, another area of heavy rainfall set up over eastern Broward County. Shortly after midnight, torrential rainfall covered most of the city of Fort Lauderdale as well as Oakland Park, Wilton Manors and southern sections of Pompano Beach. Rainfall amounts in these areas were in the 6 to 10 inch range, with isolated estimates upwards of 12 inches. Severe overnight flooding resulted from these intense rains, with a large section of Broward County from the I-95 corridor east to the coast between Broward and Commercial Boulevards under several inches to a few feet of water. Preliminary assessments from city and county officials in Broward County indicate that at least 160 homes and buildings had water intrusion, with numerous street closures.

Below is an estimate of rainfall totals covering the period from Friday through Monday. Areas in pink indicate rainfall totals over 12 inches covering sections of eastern Miami-Dade and Broward counties.



Below are measured rainfall totals in inches for locations across South Florida for the period from Friday through Monday (approximately 72 hours) compiled from several sources (NWS, SFWMD and unofficial, non-government-maintained sites)

MIAMI-DADE COUNTY:

Miami Beach	11.70
Virginia Key	11.25
Coconut Grove	10.86
Fairchild Tropical Gardens	9.74
Pinecrest	8.96

Palmetto Bay	8.92
Cutler Bay	8.62
Doral	7.62
North Miami	7.20
South Miami	6.50
Miami Lakes	6.20
Hialeah	5.19
FIU Main Campus	4.90
Opa-Locka Airport	4.34
North Miami Beach	3.49
Miami International	3.46
Homestead	1.25

BROWARD COUNTY:

Fort Lauderdale	15.23
Fort Lauderdale Beach	12.44
Coconut Creek	11.64
US 27/Alligator Alley	10.91
Oakland Park	10.75
Lauderdale Lakes	10.43
Pompano Beach	10.39
Wilton Manors	10.32
Coral Springs	9.74
Parkland	8.41
Lauderhill	7.36
Weston	7.36
Fort Lauderdale (FLL)	6.38
Davie	6.27
Sawgrass Mills	6.14
Pembroke Pines	5.30
Hollywood	5.07

Miramar	4.70
---------	------

PALM BEACH COUNTY:

Boca West	15.79
Boynton Beach	8.41
Boca Raton	8.19
Manalapan	8.09
Delray Beach	7.79
Highland Beach	6.98
Palm Beach International	6.35
Lantana	6.30
Juno Beach	6.02
15 E Pahokee	5.61
Wellington	5.27
Palm Springs	5.24
The Acreage	4.25

COLLIER COUNTY:

Marco Island	7.03
Isles of Capri	6.74
Ave Maria	6.12
North Naples	6.03
Belle Meade	5.96
Golden Gate Estates	5.93
Immokalee	4.69
East Naples	4.56

HENDRY COUNTY:

Big Cypress Reservation	4.30
SE Hendry	4.05
Clewiston	3.02

LaBelle 2.24

GLADES COUNTY:

Lakeport 3.41

Moore Haven 3.38

Buckhead Ridge 2.84

Ortona 2.50

Palmdale 2.16

October Summary

A total of three heavy rain events took place over southern Florida in October, contributing to a very wet October area-wide. Miami Beach recorded 21.34 inches of rain during the month, breaking the old monthly record of 18.02 inches set back in 1952. Almost 12 inches of this fell this past weekend. Other South Florida sites recorded high October rainfall including the following locations:

- **Miami International Airport** recorded an October total of 15.52 inches. This is 9.19 inches above normal and was the 11th wettest October on record (record is 25.02 inches set in 1924).

- **Fort Lauderdale/Hollywood International Airport** recorded an October total of 15.52 inches (same as Miami). This is 8.70 inches above normal and was the 9th wettest October on record (record is 32.10 inches set in 1924).

- **Naples Regional Airport** recorded an October total of 8.03 inches. This is 3.84 inches above normal and was the 6th wettest October on record (record is 17.52 inches set in 1951).

- **Palm Beach International Airport** recorded an October total of 9.89 inches. This is 4.76 inches above normal and was the 36th wettest October on record (record is 27.81 inches set in 1910).