

NWS Form E-5  
(04-2006)  
(PRES. BY NWS Instruction 10-924)

U.S. DEPARTMENT OF COMMERCE  
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION  
NATIONAL WEATHER SERVICE

HYDROLOGIC SERVICE AREA (HSA)  
San Juan, Puerto Rico

**MONTHLY REPORT OF HYDROLOGIC CONDITIONS**

REPORT FOR:  
MONTH            YEAR  
October        2007

TO: Hydrologic Information Center, W/OS31  
NOAA's National Weather Service  
1325 East West Highway  
Silver Spring, MD 20910-3283

SIGNATURE  
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Service Hydrologist  
DATE  
12/06/2007

*When no flooding occurs, include miscellaneous river conditions below the small box, such as significant rises, record low stages, ice conditions, snow cover, droughts, and hydrologic products issued (NWS Instruction 10-924).*

An X inside this box indicates that no flooding occurred within this hydrologic service area.

Summary: The San Juan ASOS reported 4.96 inches of rain for the month of October ... 0.10 inches less than the normal of 5.06 inches. The ASOS rainfall report at Truman Field in St. Thomas reported 8.72 inches of rain (a record) for the month of October ... 3.15 inches more than the normal of 5.57 inches.

For graphics of October rainfall for Puerto Rico:  
[http://www.srh.noaa.gov/alr/monthly/pr\\_2007\\_oct.htm](http://www.srh.noaa.gov/alr/monthly/pr_2007_oct.htm)

Except for the beginning and end of October, the month of October was pretty dry across the region and while the beginning of the month was wet, it paled in comparison to the end of the month with the passing of the system that would turn out to be Tropical Storm Noel.

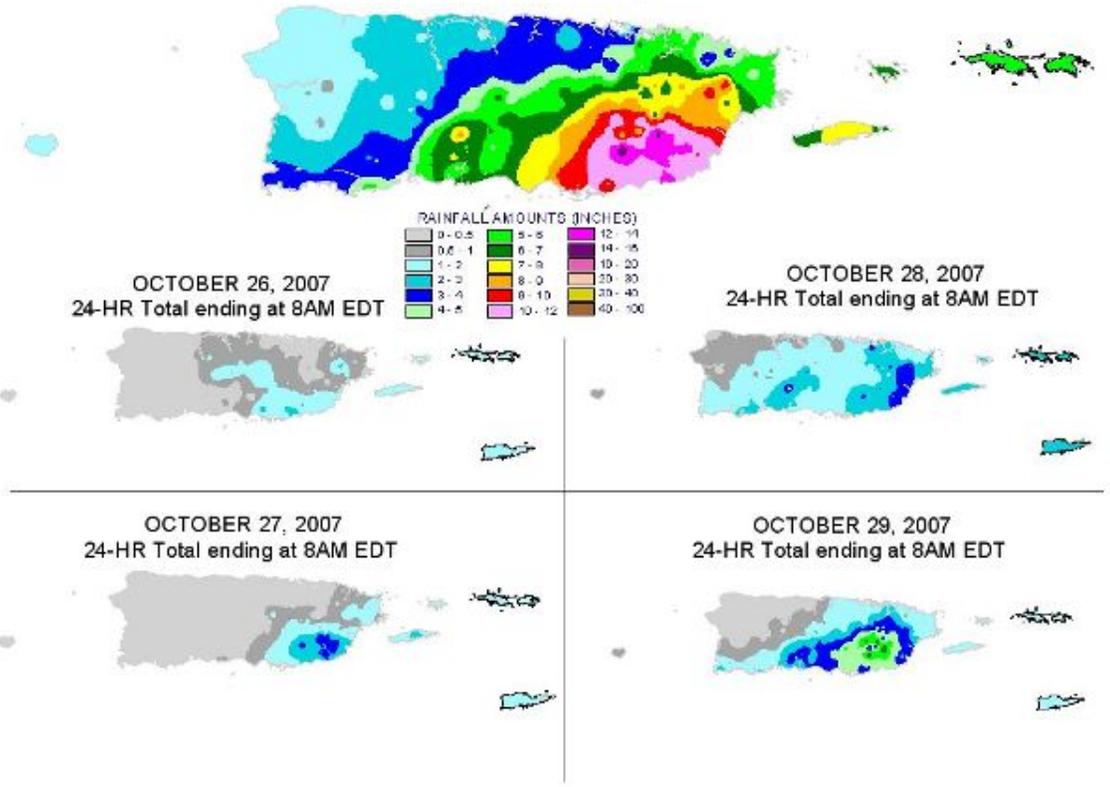
(Excerpt from the MONTHLY TROPICAL WEATHER SUMMARY, NWS TPC/NATIONAL HURRICANE CENTER MIAMI FL)

"TROPICAL STORM NOEL...NOEL FORMED FROM A TROPICAL WAVE THAT DEPARTED THE WEST COAST OF AFRICA ON 16 OCTOBER. AS THIS WAVE APPROACHED THE LESSER ANTILLES...IT BEGAN TO INTERACT WITH AN UPPER-LEVEL TROUGH LOCATED NEAR PUERTO RICO. THIS INTERACTION LEAD TO THE FORMATION OF A BROAD SURFACE LOW PRESSURE AREA ON 23 OCTOBER... ABOUT 150 MILES EAST-NORTHEAST OF THE NORTHERN LEEWARD ISLANDS. AFTER FORMING...THE LOW MOVED SLOWLY WESTWARD TO WEST-SOUTHWESTWARD DURING THE NEXT COUPLE OF DAYS. STRONG UPPER-LEVEL WESTERLY WINDS THAT INITIALLY INHIBITED ADDITIONAL DEVELOPMENT OF THE LOW DECREASED ON THE 27 OCTOBER. THIS RESULTED IN THE FORMATION OF A TROPICAL DEPRESSION EARLY ON 28 OCTOBER...ABOUT 200 MILES SOUTH OF PORT AU PRINCE HAITI."

This "passing" was a major rainmaker for the region which resulted in flooding and mud slides in the U.S. Virgin Islands and Puerto Rico. The rainfall was spread out over a few days and set up the conditions for mudslides which were responsible for some fatalities in Puerto Rico.

Please see the following graphic for a summary of the rainfall (**Graphic produced by the NWS - Southeast River Forecast Center**).

### 4-Day Rainfall Totals OCTOBER 26 - 29, 2007



Highest Rainfall Accumulations from October 26<sup>th</sup> – 29<sup>th</sup>, 2007

Station Name ( <b>USGS data</b> )	5 Day Totals
LAGO CARITE AT GATE TOWER NR CAYEY, PR	17.41
RIO GRANDE DE LOIZA AT QUEBRADA ARENAS, PR	17.07
QUEBRADA ARENAS RAINGAGE, SAN LORENZO PR	14.52
RAINGAGE AT BO. MARIN NR PATILLAS, PR	13.64
RIO GRANDE DE PATILLAS NR PATILLAS, PR	13.59
RIO MAUNABO AT LIZAS, PR	13.3

These were the USGS gaged locations that showed the highest rainfall totals for this event. These sites were predominantly in southeastern to eastern interior Puerto Rico and affected the Rio Grande de La Plata, Rio Guayanes, Rio Patillas and the Upper Rio Grande de Loiza Basin. The entire Upper Rio Grande de Loiza basin had significant

rainfall from this event with an approximate basin average of between 8 and 9 inches. While this rainfall was responsible for flooding in many communities including the municipalities of Trujillo Alto, Caguas, Gurabo, and portions of San Lorenzo, the runoff was beneficial to the Carraizo Dam which supplies potable water to more than 750,000 persons within the San Juan metropolitan area. The headwaters of the Rio de La Plata registered the highest 5 day total for this event with Lago Carite near Cayey reporting over 17 inches of rainfall. This was also beneficial rainfall for the island's water supply since the flow on this river feeds the Rio de La Plata Reservoir.

All varieties of flooding were common ... from urban and poor drainage to flash flooding and river flooding at many of the NWS forecast locations. Flooding was reported at six (6) of Puerto Rico's thirteen (13) NWS forecast locations. A total of 19 locations across Puerto Rico exceeded Flood Stage. Most of the flooding was in the minor to moderate category since the rainfall was spread over such a long period of time.

Puerto Rico returned to "normal" on the Drought Monitor Map after the wet period at the end of October.

Please note the following drought related graphic:

<http://www.drought.unl.edu/dm/monitor.html>

**Table 1 - Hydrologic Products Issued**

Non-Routine Hydrologic Products Issued:	Approximate number of Products for the month
Hydrologic Outlooks (SJUESFSJU)	0
Flood Watches (SJUFFASJU)	15
Flood Warnings (SJUFLWSJU)	17
Flash Flood Warnings (SJUFFWSJU)	25
Flash Flood Statements (SJUFFSSJU)	21
Urban/Small Stream Flood Advisories (SJUFLSSJU)	88