

MONTHLY REPORT OF HYDROLOGIC CONDITIONS

REPORT FOR:
MONTH YEAR
August 2014

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
09/12/2014

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 Airport ASOS in Puerto Rico reported 9.79 inches of rain for the month of August; 4.33 inches greater than the normal of 5.46 inches. The ASOS rainfall report from Cyril E. King Airport in St. Thomas was 7.35 inches for the month of August; 3.61 inches greater than the normal of 3.74 inches. The ASOS rainfall report from Henry E. Rohlsen Airport in St. Croix was 5.65 inches for the month of August; 2.50 inches greater than the normal of 3.15 inches.

“After a very dry period during the months of June and July when abnormally dry to drought conditions were reported across most of the islands, some relief arrived in August. August 2014 began with the outer rain bands of [Tropical Storm Bertha](#) affecting southern and eastern Puerto Rico as well as the U.S. Virgin Islands on August 2nd with rainfall accumulations exceeding 10 inches across the central interior of Puerto Rico. As August moved into its third week, a second rainfall event took place. This rainfall event was the result of a [strong tropical wave](#) that moved across the local area and eventually became Hurricane Cristobal. This feature left rainfall accumulations exceeding 10 inches over and south of the Cordillera Central.”
(Excerpt - Please see <http://www.srh.noaa.gov/sju/?n=aug2014cr> for August's complete Climate Report.)

Before Tropical Storm Bertha and the strong tropical wave, almost sixty percent of Puerto Rico had been assigned to the [abnormally dry or moderate drought](#) categories (*updated weekly - see corresponding table for updated numbers*) in the U.S. Drought Monitor, due to short and long term rainfall deficits. A Puerto Rico water rationing plan was released (to begin in August) for some sections of the island. This plan was never implemented due to significant runoff to the lakes and reservoirs from the rains of August. Many rivers and communities were impacted due to flooding from these events. Please see below and refer to the [Crest Report](#) for details.

Rainfall and Flood Impacts from Bertha (excerpt from SJU's report)					
Highest reported rainfall from Aug. 2 / 6am to Aug. 3 / 6am by Station					
Lago Adjuntas - Adjuntas	11.11	Rio Saliente	6.33	Lago de Cidra	3.56
Rio Tanama	8.60	Rio Caonillas	5.68	Rio Portugues	3.50
Adjuntas Lago Garza	8.29	Lago Yahuecas	5.40	Lago Toa Vaca at Dam	3.48
Arecibo Observatory	7.60	Lago Matrullas	4.85	Rio Coamo at Rd 14	3.14
Villalba	7.29	Rio Limon	4.35	Rio Camuy - Bayaney	3.12
Ciales	6.63	Lago Caonillas	4.32		
Lago Vivi - Utuado	6.48	Lago Carite	3.72		
The overall damage from the tropical storm was relatively minor though that always sounds					

hollow to the people who were impacted in a significant manner. The following is a summary of reported damage with the time occurrence.

215 pm – Villalba, flash flood as a creek was out of its banks in Barrio El Pino.

435 pm – Utuado, several mudslides in Utuado, urban flooding at Urbanization Cabrera, Rio Grande de Arecibo out of its banks at Guanico sector between PP-10 and PR-123 which closed the road.

500 pm – Orocovis, mudslide at Barrio Berenjales, PR-143.

520 pm – Mayaguez, Barrio Trastalleres near University of Puerto Rico at Mayaguez flooded a road, and urban flooding at Parque El Nuevo Milenio near Barrio Guanajibo.

Bertha was continuing to move west-northwest during its passage of the local islands and had even increased its forward speed to 22 mph. This quick movement, the dry air that had been entrained into the circulation and especially the dry soils that had been present prior to its arrival, were all factors in not issuing a flash flood watch before arrival. Some flooding was expected but not to be widespread or as significant as many typical systems.

Rainfall and Flood Impacts from [Tropical Wave](#)

August 22 to Aug 24, 2014

(excerpt from SJU's report)

Reported rainfall (in.) from Aug. 21 to Aug. 24, daily totals ending at 1200 UTC (700 am AST) on designated date				
Reporting Rain Gage	Aug. 22	Aug. 23	Aug. 24	Total
Rio Portugues near Tibes	0.02	3.25	9.94	13.21
Lago Carite at Spillway near Guayama	0.33	6.34	5.86	12.53
Villalba – Bo Apeadero	0.16	3.08	8.17	11.41
Adjuntas – Lago Garzas	0.01	4.41	6.79	11.21
Ciales – Lago El Guineo	0.18	3.05	7.76	10.99
Guayanilla	0.00	2.76	7.95	10.71
Ponce below Portugues Dam	0.00	2.10	7.89	9.99
Lago Adjuntas near Adjuntas	0.60	2.78	6.34	9.72
Lago de Matrullas	0.69	2.11	6.90	9.70
Lago Cerrillos at Damsite	0.00	2.66	6.96	9.62
Lago Vivi near Utuado	0.64	1.92	6.40	8.96
San Lorenzo – Qb Blanca	0.11	4.78	3.72	8.61
Rio Grande near El Verde	1.46	1.97	4.93	8.16
Pueblito del Rio	0.47	3.59	4.02	8.08
Patillas – Bo Marin	0.48	4.32	3.14	7.94
Rio Icacos near Naguabo	0.76	3.44	3.72	7.92
Rio Canovanas near Campo Rico	1.06	2.77	4.08	7.91
Guayama – Canal de Guamani at Hwy 15	0.11	6.80	0.95	7.86
Vaqueria El Mimo, near Caguas	0.17	3.15	4.34	7.66
Lago Luchetti at Dam above Yuaco 4 NW	0.00	3.52	4.09	7.61
Lago Guayabal Damsite near Juana Diaz	0.01	1.46	6.13	7.60
Rio Humacao at Las Piedras	1.09	3.47	2.93	7.49
Rio Caguitas at Villa Blanca	0.52	3.09	3.86	7.47
Aibonito	0.16	3.70	3.50	7.36
Barrio Beatriz near Caguas	0.45	2.73	3.96	7.14
Guayama	0.44	4.96	1.68	7.08
Rio Caonillas at Palma Paso	0.42	1.43	5.16	7.01
Lago Icacos at Damsite	0.83	3.15	2.82	6.80

Damage and other impacts in Puerto Rico as reported by public and law enforcement due to the rainfall and resultant flooding are summarized below. No damage was reported in Vieques, Culebra, or the U.S. Virgin Islands.

August 22, 520 pm – Yabucoa, flash flood with Guayanes River at Calabazas Sector.
 August 23, 1255 pm – Caguas, flash flood with river out of its banks at Borinquen Sector.
 August 23, 249 pm – Caguas, flash flood of Rio Caguitas.
 August 23, 306 pm – San Juan, flood of McLeary Avenue at Ocean Park.
 August 23, 306 pm – Ponce, road flooded at Real Anon Sector at Corral Falso.
 August 23, 348 pm – Cayey, mudslide over PR-1 highway at intersection with PR-7722.
 August 23, 418 pm – Santa Isabel, urban flooding downtown.
 August 23, 1055 pm – Ponce, flash flood as PR-1 and PR-2 highways were flooded and Rio Inabon was out of its banks.
 August 24, 1238 am – Yauco, flash flood from Rio Loco in Yauco. PR-121 highway was closed in Yauco.
 August 24, 211 am – Yauco, flash flood as Lago Luchetti in Yauco was out of its banks. People were evacuated in Sector Luchetti.
 August 24, 220 am – Utuado, flash flood as Rio Vivi and Rio Caonillas were out of their banks and impacted PR-111 highway.

Approximate number of Hydrologic Products (flood related) issued during the month of August.

Non-Routine Hydrologic Products Issued:	Approximate number of Products for the month
Hydrologic Outlooks (SJUESFSJU)	0
Flood Watches (SJUFFASJU)	11
Flood Warnings (SJUFLWSJU)	4
Flash Flood Warnings (SJUFFWSJU)	21
Flash Flood Statements (SJUFFSSJU)	11
Urban/Small Stream Flood Advisories (SJUFLSSJU)	109

Here is the [August 2014 rainfall totals graphic](#).

For monthly “radar totals” use the archive of the Advanced Hydrologic Prediction Service (AHPS) - click on the Precipitation interface for San Juan, Puerto Rico and request the duration you would like to view...daily or monthly remembering that the 24 hour totals are from 12z – 12z (8am to 8am in PR) - AHPS archive of radar totals/ images.

(<http://water.weather.gov/precip/?loctype=WFO&loc=wfoSJU>)