

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
March 2012

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

SIGNATURE
Althea Austin-Smith,
Service Hydrologist
DATE
04/04/2012

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 1.97 inches of rain for the month of March; 7.32 inches greater than the normal of 1.95 inches. The ASOS rainfall report from Cyril E. King Airport in St. Thomas was 3.95 inches for the month of March; 2.53 inches greater than the normal of 1.42 inches.

“A generally fair and mainly dry weather pattern prevailed during the first period of the month with just isolated morning showers across the windward side of the local islands and limited afternoon convection across Puerto Rico. By midmonth, a transition to a more convective/wet pattern was noticed. A mid to upper level trough meandered between the Caribbean basin and the tropical Atlantic, generating favorable conditions for shower and thunderstorm enhancement. This feature interacted with diurnal heating and local effects to generate convective activity along the Cordillera Central and the coastal sections. Due to the Northeast prevailing winds, afternoon showers and thunderstorms were concentrated along the interior and southwest portions of Puerto Rico. In addition, during the evening and early morning hours, showers and thunderstorms continued to re-develop over the eastern third of Puerto Rico as mid to upper level disturbances generated favorable conditions across the area.”
Please see (<http://www.srh.noaa.gov/sju/?n=mar2012cr>) for March's Climate Report.

Heavy rains toward the end of March resulted in significant flooding in some sections of Puerto Rico. In the U.S. Virgin Islands where some flooding did occur, the impact was not significant. In Puerto Rico, the hardest hit areas were from the central interior to the north coast affecting the Rio Grande de Arecibo and its tributaries, the Rio Manati, Rio Cibuco, Rio de la Plata, Rio Camuy, Rio Fajardo, Rio Naguabo and Rio Espiritu Santo. A USGS gage in the Rio Tanama basin (tributary to the Rio Grande de Arecibo) had a 24 hour report of over 12 inches on March 29th. The incredible runoff from this rainfall within the Rio Grande de Arecibo basin in addition to flow from the Rio Grande de Arecibo at Lago Dos Bocas, which rose to almost 303 feet ... almost 6 feet above the spillway, caused rapid and significant rises in the municipality of Arecibo, downstream from Dos Bocas reservoir to the coast. In the Local Storm Reports (below), you will see the impact to the public and infrastructure in the form of flash floods, debris flow and numerous evacuations over a three to four day span as this weather pattern lingered regenerating intermittent pockets heavy rainfall across the same areas.

(The details of the crests can be found in [March's Flood Stage Report.](#))

**24 HOUR RAINFALL COLLECTIVE ENDING AT 12Z (8am)
SOUTHEAST RIVER FORECAST CENTER - ATLANTA, GA
WED MAR 28 2012(8am) thru THU MAR 29 2012(8am)**

UTHP4 12.62 :R TANAMA NR UTUADO (PR)
 JABP4 8.13 :B MAMAYS AB/JYUYA 6N (PR)
 NGHP4 6.79 :QUEB GUABA/NAGUABO (PR)
 NGIP4 5.53 :R ICACOS NR NAGUABO (PR)
 UTKP4 5.49 :B RNCADOR NR UTUADO (PR)
 ANBP4 5.38 :LAS MARIAS 2NW (PR)
 SEBP4 5.17 :SAN SEBASTIAN (PR)
 CIAP4 4.76 :MANATI AT CIALES (PR)

USGS Gages

SIX DAY TOTALS OF GREATER THAN 5 INCHES

THIS IS THE RAINFALL ACCUMULATIONS ENDING AT
12Z (8AM) EACH DAY FOR THE FOLLOWING DAYS

DATE	26	27	28	29	30	31	TOTAL
NGHP4	2.20	0.08	0.47	6.79	3.60	5.57	18.71
NGIP4	1.85	0.10	0.34	5.53	4.60	5.33	17.75
UTHP4	1.35	0.00	0.06	12.62	0.47	0.70	15.20
MSCP4	0.95	0.36	0.30	2.31	3.26	4.39	11.57
YBUP4	1.99	0.00	0.00	1.95	4.16	2.26	10.36
LICP4	0.72	0.18	0.07	3.15	3.72	2.48	10.32
JABP4	0.28	0.31	0.14	8.13	0.49	0.16	9.51
UTKP4	1.35	0.01	0.45	5.49	0.44	0.54	8.28
ANBP4	0.44	0.42	0.00	5.38	1.19	0.67	8.10
VINP4	1.18	0.00	3.71	0.13	0.05	2.51	7.58
PARP4	0.16	0.00	0.17	1.00	1.35	4.64	7.32
SEBP4	0.30	0.40	0.00	5.17	0.59	0.15	6.61
BZCP4	0.44	0.01	1.65	1.47	0.35	2.10	6.02
OROP4	1.13	0.01	1.26	3.15	M	0.12	5.67
SLMP4	0.42	0.00	0.25	1.16	1.04	2.64	5.51
COMP4	M	0.00	3.69	0.89	0.03	0.74	5.35
DRAP4	0.00	0.00	2.96	1.69	0.25	0.32	5.22
VAMP4	0.06	0.00	0.24	1.56	1.34	2.01	5.21
CIAP4	0.11	0.28	M	4.76	0.02	0.03	5.2
CAHP4	0.20	0.00	1.75	1.71	0.37	1.08	5.11
GUSP4	0.62	0.00	0.26	0.66	0.73	2.75	5.02

USGS Gages

The approximate amounts of Hydrologic Products issued during the month of March are as follows:

Non-Routine Hydrologic Products Issued:	Approximate number of Products for the month
Hydrologic Outlooks (SJUESFSJU)	1
Flood Watches (SJUFFASJU)	4
Flood Warnings (SJUFLWSJU)	27
Flash Flood Warnings (SJUFFWSJU)	18
Flash Flood Statements (SJUFFSSJU)	15
Urban/Small Stream Flood Advisories (SJUFLSSJU)	175

Local Storm Reports for March

... from numerous sources

..TIME...	...EVENT...	...CITY LOCATION...	...LAT.LON...
..DATE...MAG....	..COUNTY LOCATION..ST..	...SOURCE....
	..REMARKS..		
0427 PM 03/12/2012	FLASH FLOOD	VEGA ALTA VEGA ALTA	18.42N 66.32W PR EMERGENCY MNGR
	ROUTES 620 AND 647 ARE CLOSED DUE TO FLOODING ALONG THE CIBUCO RIVER. ROUTES 675...676 AND 690 IN VEGA ALTA WILL BE CLOSED SHORTLY DUE TO RAPIDLY RISING WATERS.		
0320 PM 03/25/2012	FLOOD	RIO GRANDE RIO GRANDE	18.38N 65.84W PR EMERGENCY MNGR
	ROAD 956 INTERCEPTION WITH ROAD 960 CLOSED DUE TO RIVER OUT OF ITS BANKS.		
0340 PM 03/25/2012	FLOOD	FAJARDO FAJARDO	18.33N 65.66W PR BROADCAST MEDIA
	RIO FAJARDO OUT OF ITS BANKS...OVER ROAD 3.		
0220 PM 03/25/2012	FLOOD	NAGUABO NAGUABO	18.21N 65.74W PR EMERGENCY MNGR
	ROAD 31 IN NAGUABO INTERCEPTION WITH EXIT 21 OF HIGHWAY 53 CLOSED IN BARRIO RIO BLANCO.		
0240 PM 03/27/2012	FLASH FLOOD	OROCOVIS OROCOVIS	18.23N 66.39W PR COUNTY OFFICIAL
	RIVER OUT OF ITS BANK AND FLOODING DOWNTOWN AREA.		
0335 PM 03/27/2012	DEBRIS FLOW	CAGUAS CAGUAS	18.23N 66.04W PR LAW ENFORCEMENT
	LANDSLIDE IN ROAD 172 KM 3.2 FROM CIDRA TO CAGUAS.		

0455 PM 03/27/2012	FLASH FLOOD	BARRANQUITAS BARRANQUITAS	PR	18.19N 66.31W PUBLIC
		MANY ROADS CLOSE DUE TO RIVERS OUT OF THEIR BANKS.		
0430 PM 03/27/2012	FLOOD	CAGUAS CAGUAS	PR	18.23N 66.04W EMERGENCY MNGR
		SMALL STREAM OVER ROAD 785 IN CAGUAS.		
0430 PM 03/27/2012	DEBRIS FLOW	AGUAS BUENAS AGUAS BUENAS	PR	18.26N 66.11W EMERGENCY MNGR
		LANDSLIDE IN AGUAS BUENAS.		
0430 PM 03/27/2012	FLOOD	OROCOVIS OROCOVIS	PR	18.23N 66.39W EMERGENCY MNGR
		WATER FLOODED HOUSE IN ROAD 569 IN OROCOVIS.		
0715 PM 03/28/2012	FLOOD	CAROLINA CAROLINA	PR	18.41N 65.98W BROADCAST MEDIA
		STREETS FLOODED IN 65 AVE INT CAMPO RICO.		
0715 PM 03/28/2012	DEBRIS FLOW	UTUADO UTUADO	PR	18.27N 66.71W EMERGENCY MNGR
		LANDSLIDE IN UTUADO ROAD 140 BO CAUDILLA MAIN STREET SECTOR LOCORALISA.		
0826 PM 03/28/2012	DEBRIS FLOW	NARANJITO NARANJITO	PR	18.31N 66.25W EMERGENCY MNGR
		LANDSLIDE IN ROAD PR-814 NEAR KM 2.5 BARRIO ANONES. ROAD CLOSED		
0750 PM 03/28/2012	FLASH FLOOD	UTUADO UTUADO	PR	18.27N 66.71W EMERGENCY MNGR
		HOUSES FLOODED WITH 2 PEOPLE AFFECTED. ALSO 2 PEOPLE TRAPPED IN ROAD.		
0800 PM 03/28/2012	DEBRIS FLOW	UTUADO UTUADO	PR	18.27N 66.71W EMERGENCY MNGR
		LANDSLIDES IN ROAD 111 BO CAGUANA...ROAD 123 SECTOR GROLO.		
0835 PM 03/28/2012	FLASH FLOOD	SAN SEBASTIAN SAN SEBASTIAN	PR	18.34N 67.00W EMERGENCY MNGR
		ROAD 111 FLOODED.		

0840 PM 03/28/2012	FLASH FLOOD	UTUADO UTUADO	PR	18.27N 66.71W EMERGENCY MNGR
	HOUSES AND ROADS FLOODED IN JESUS MARIA LAGO AND IN ROAD 10 RIO ABAJO BO LA PALA MARCELO WITH PEOPLE AFFECTED.			
0845 PM 03/28/2012	FLASH FLOOD	SAN SEBASTIAN SAN SEBASTIAN	PR	18.34N 67.00W EMERGENCY MNGR
	ROAD 111 IN BO HATO ARRIBA FLOODED.			
0920 PM 03/28/2012	DEBRIS FLOW	UTUADO UTUADO	PR	18.27N 66.71W EMERGENCY MNGR
	ROAD 111 FROM UTUADO TO LARES IMPASSABLE AT CAGUANA DUE TO SEVERAL LANDSLIDES.			
0920 PM 03/28/2012	DEBRIS FLOW	UTUADO UTUADO	PR	18.27N 66.71W EMERGENCY MNGR
	ROAD 123 AT BO SALTO ABAJO WITH FLOODING AND LANDSLIDE.			
0525 AM 03/29/2012	FLASH FLOOD	VEGA ALTA VEGA ALTA	PR	18.42N 66.32W PUBLIC
	RIGHT LANE OF ROAD PR-2 IN VEGA ALTA IMPASSABLE. ALSO ROAD PR-690 BETWEEN BRENAS AND CERRO GORDO WERE IMPASSABLE.			
0532 AM 03/29/2012	FLASH FLOOD	MANATI MANATI	PR	18.43N 66.48W PUBLIC
	ROAD PR-2, KM 50 WAS CLOSED DUE TO RIO MANATI OUT OF ITS BANKS.			
0532 AM 03/29/2012	FLASH FLOOD	VEGA ALTA VEGA ALTA	PR	18.42N 66.32W PUBLIC
	ROAD PR-2 IN VEGA ALTA WAS REPORTED FLOODED.			
0532 AM 03/29/2012	FLASH FLOOD	FAJARDO FAJARDO	PR	18.33N 65.66W EMERGENCY MNGR
	RIO FAJARDO WAS REPORTED OUT OF ITS BANKS BETWEEN ROAD 3 AND 53.			
0532 AM 03/29/2012	FLOOD	VEGA ALTA VEGA ALTA	PR	18.42N 66.32W PUBLIC
	ROAD BETWEEN BARRIO MARICAO AND VEGA ALTA DOWNTOWN WAS FLOODED.			
0549 AM 03/29/2012	FLASH FLOOD	VEGA ALTA VEGA ALTA	PR	18.42N 66.32W PUBLIC
	ROAD 2, KM 31.6 CLOSE DUE TO RIO CIBUCO OUT OF ITS BANKS.			

0623 AM 03/29/2012	FLASH FLOOD	VEGA ALTA VEGA ALTA	PR	18.42N 66.32W PUBLIC
ROAD PR-694 AT MONTEREY SECTOR WAS REPORTED FLOODED.				
0628 AM 03/29/2012	DEBRIS FLOW	UTUADO UTUADO	PR	18.27N 66.71W PUBLIC
ROADS PR-10 AND PR-111 IMPASSABLE DUE TO A LANDSLIDE.				
0628 AM 03/29/2012	FLASH FLOOD	NAGUABO NAGUABO	PR	18.21N 65.74W PUBLIC
ROAD 31 AT LA PITINA SECTOR WAS CLOSED DUE TO RIVER OUT OF ITS BANKS.				
0643 AM 03/29/2012	FLASH FLOOD	VEGA BAJA VEGA BAJA	PR	18.44N 66.40W EMERGENCY MNGR
CAR STRANDED IN ROAD 160 DUE TO RIO CIBUCO OUT OF ITS BANKS.				
0643 AM 03/29/2012	FLOOD	DORADO DORADO	PR	18.47N 66.27W PUBLIC
ROAD 2 WITH INTERESECTION WITH ROAD 22 FLOODED.				
0708 AM 03/29/2012	FLASH FLOOD	VEGA ALTA VEGA ALTA	PR	18.42N 66.32W EMERGENCY MNGR
ROADS 620,647,675 AND 690 CLOSED DUE TO RIO CIBUCO OUT OF ITS BANKS.				
1000 AM 03/29/2012	DEBRIS FLOW	MOROVIS MOROVIS	PR	18.33N 66.41W EMERGENCY MNGR
ROAD 155 BARRIO PERCHA, ZAPATA SECTOR WAS CLOSED DUE TO LANDSLIDE. ALSO 2 LANDSLIDES WERE REPORTED AT ROAD 567.				
1000 AM 03/29/2012	DEBRIS FLOW	CIALES CIALES	PR	18.34N 66.47W EMERGENCY MNGR
LANDSLIDE ROAD 146 INTERSECTION WITH ROAD 140 AT LIMON SECTOR.				
1000 AM 03/29/2012	DEBRIS FLOW	NARANJITO NARANJITO	PR	18.31N 66.25W EMERGENCY MNGR
LANDSLIDE AT ROAD 811 KM 3.0 INTERSECTION WITH BARRIO CEDRO ABAJO, EL CUATRO SECTOR.				

1000 AM 03/29/2012	FLOOD	YABUCOA YABUCOA	PR	18.05N 65.88W EMERGENCY MNGR
		ROAD 196 WAS REPORTED FLOODED DUE TO A CREEK OUT OF ITS BANKS.		
1000 AM 03/29/2012	FLOOD	CAROLINA CAROLINA	PR	18.41N 65.98W EMERGENCY MNGR
		ROAD 190 IN FRONT OF INES MARIA MENDOZA SCHOOL FROM SABANA ABAJO SECTOR.		
1000 AM 03/29/2012	FLOOD	CAROLINA CAROLINA	PR	18.41N 65.98W EMERGENCY MNGR
		ROAD 220 URB. EL COMANDANTE CLOSED.		
1220 PM 03/30/2012	FLASH FLOOD	RIO GRANDE RIO GRANDE	PR	18.38N 65.84W PARK/FOREST SRVC
		SEVERAL TRIBUTARIES OF THE LA MINA RIVER WHICH FEED INTO THE MAMEYES HAVE GONE OVER HIGHWAY 191 IN THE UPPER AREAS OF EL YUNQUE NATIONAL RAIN FOREST.		
1242 PM 03/30/2012	FLOOD	SAN JUAN SAN JUAN	PR	18.41N 66.06W EMERGENCY MNGR
		65TH INFANTERIA AVENUE PARTIALLY FLOODED.		

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](#) . Here are the [March 2012 totals](#).