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| <b>NWS Form E-5</b><br>(04-2006)<br>(PRES. BY NWS Instruction 10-924)  | <b>U.S. DEPARTMENT OF COMMERCE</b><br><b>NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION</b><br><b>NATIONAL WEATHER SERVICE</b> | HYDROLOGIC SERVICE AREA (HSA)<br><b>San Juan, Puerto Rico</b>                       |
| <b>MONTHLY REPORT OF HYDROLOGIC CONDITIONS</b>   |   | REPORT FOR:<br>MONTH            YEAR<br>December        2013                        |
| TO: Hydrologic Information Center, W/OS31<br>NOAA's National Weather Service<br>1325 East West Highway<br>Silver Spring, MD 20910-3283 |   | SIGNATURE<br>Althea Austin-Smith,<br>Service Hydrologist<br><hr/> DATE<br>01/8/2014 |

*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 7.62 inches of rain for the month of December; 2.60 inches greater than the normal of 5.02 inches. The ASOS rainfall report from Cyril E. King Airport in St. Thomas was 7.34 inches for the month of December; 4.38 inches greater than the normal of 2.96 inches. The ASOS rainfall report from Henry E. Rohlsen Airport in St. Croix was 6.64 inches for the month of December; 3.67 inches greater than the normal of 2.97 inches.

*"The first two week of December 2013, persistent periods of passing showers embedded in the trades dominated the local weather regime with shower activity focused across the windward side of local islands. During the Christmas week, a much wetter pattern prevailed across the forecast area, as an upper level trough developed over the eastern Caribbean. Rainfall totals associated with the aforementioned trough were between 3 and 5 inches across eastern Puerto Rico as well as the US Virgin Islands."*

*(Excerpt - Please see (<http://www.srh.noaa.gov/sju/?n=dec2013cr>) for December's complete Climate Report.)*

The month of December was the tale of two extremes...at the beginning and end of the month was the wet period and the remainder of the month, the dry period. During the wet period rainfall amounts and intensities resulted in significant flooding in some communities across the Hydrologic Service Area.

The majority of the flooding from the heavy rains was confined to the U.S. Virgin Islands, Eastern Puerto Rico and the San Juan Metro area where flash floods left many motorists stranded, created landslides and flooded roads and communities. Alternately, based on the U.S. Drought Monitor, a section of southern Puerto Rico remained in the [abnormally dry category](#) for the month of December due to short and long term rainfall deficits in that area.

Even with above normal rainfall, the Rio Fajardo in northeastern Puerto Rico was the only gaged river that reported values over flood stage during the month of December. There are no remaining gaged rivers/guts in the U.S. Virgin Islands.

Here is the [December Flood Crest Report](#) (E3).

See details of some flood reports in the LSR reports below:

| <b>Local Storm Reports for December 2013</b> |  |                                  |                                     |
|--|--|----------------------------------|-------------------------------------|
| ..TIME...                                    | ...EVENT...  | ...CITY LOCATION...              | ...LAT.LON...                       |
| ..DATE...                                    | ....MAG....  | ..COUNTY LOCATION..ST..          | ...SOURCE....                       |
|  | ..REMARKS..  |                                  |                                     |
| 0800 PM<br>12/01/2013                        | FLOOD  | VEGA ALTA<br>VEGA ALTA           | 18.42N 66.32W<br>PR EMERGENCY MNGR  |
|  | EMERGENCY MANAGERS REPORTED ROAD 620 FLOODED IN LOW LYING AREAS AT BARRIO FATIMA.                            |                                  |                                     |
| 1200 PM<br>12/04/2013                        | FLOOD  | CHARLOTTE AMALIE<br>SAINT THOMAS | 18.34N 64.93W<br>VI 911 CALL CENTER |
|  | MAIN STREET WAS REPORTED FLOODED.  |                                  |                                     |
| 0230 PM<br>12/04/2013                        | FLOOD  | CHRISTIANSTED<br>SAINT CROIX     | 17.75N 64.71W<br>VI 911 CALL CENTER |
|  | GALLOWS BAY AREA WAS REPORTED FLOODED.   |                                  |                                     |
| 0230 PM<br>12/04/2013                        | FLOOD  | CHRISTIANSTED<br>SAINT CROIX     | 17.75N 64.71W<br>VI 911 CALL CENTER |
|  | HOVENSA IN THE VICINITY OF MELVIN EVANS HIGHWAY WAS REPORTED FLOODED.  |                                  |                                     |
| 0230 PM<br>12/04/2013                        | FLOOD  | CHRISTIANSTED<br>SAINT CROIX     | 17.75N 64.71W<br>VI 911 CALL CENTER |
|  | SION FARM ALONG QUEEN MARY HIGHWAY AND IN THE VICINITY OF LEW MUCKLE ELEMENTARY SCHOOL WAS REPORTED FLOODED. |                                  |                                     |
| 0230 PM<br>12/04/2013                        | FLOOD  | CHRISTIANSTED<br>SAINT CROIX     | 17.75N 64.71W<br>VI 911 CALL CENTER |
|  | GOLDEN ROCK AREA IN THE VICINITY OF THE SHOPPING CENTER WAS REPORTED FLOODED.                                |                                  |                                     |
| 0230 PM<br>12/04/2013                        | FLOOD  | CHRISTIANSTED<br>SAINT CROIX     | 17.75N 64.71W<br>VI 911 CALL CENTER |
|  | PETERS RESTAURANT VICINITY JUNYS BAR WAS REPORTED FLOODED.   |                                  |                                     |
| 0230 PM<br>12/04/2013                        | FLOOD  | CHRISTIANSTED<br>SAINT CROIX     | 17.75N 64.71W<br>VI 911 CALL CENTER |
|  | ESTATE STRAWBERRY ALONG QUEEN MARY HIGHWAY WAS REPORTED FLOODED.   |                                  |                                     |
| 0230 PM                                      | FLOOD  | CHRISTIANSTED                    | 17.75N 64.71W                       |

|                       |             |  |    |                         |
|-----------------------|-------------|--|----|-------------------------|
| 12/04/2013            |             | SAINT CROIX  | VI | 911 CALL CENTER         |
|                       |             | MELVIN EVANS HIGHWAY IN THE VICINITY OF HOME DEPOT WAS REPORTED FLOODED. |    |                         |
| 0841 AM<br>12/05/2013 | FLOOD       | BAYAMON<br>BAYAMON   | PR | 18.38N 66.16W<br>PUBLIC |
|                       |             | RAMON LUIS RIVERA AVENUE WAS REPORTED FLOODED.                           |    |                         |
| 0856 AM<br>12/05/2013 | FLOOD       | GUAYNABO<br>GUAYNABO   | PR | 18.39N 66.11W<br>PUBLIC |
|                       |             | URBAN FLOODING WAS REPORTED AT SHIRLEYS PLAZA IN SANTURCE.               |    |                         |
| 0858 AM<br>12/05/2013 | FLOOD       | BAYAMON<br>BAYAMON   | PR | 18.38N 66.16W<br>PUBLIC |
|                       |             | URBAN FLOODING WAS REPORTED AT RIO PLANTATION.                           |    |                         |
| 0858 AM<br>12/05/2013 | FLOOD       | SAN JUAN<br>SAN JUAN   | PR | 18.41N 66.06W<br>PUBLIC |
|                       |             | MUNOZ RIVERA AVENUE WAS REPORTED FLOODED NEAR PARQUE CENTRAL.            |    |                         |
| 0916 AM<br>12/05/2013 | FLASH FLOOD | GUAYNABO<br>GUAYNABO   | PR | 18.39N 66.11W<br>PUBLIC |
|                       |             | PR-165 NEAR SAN PATRICIO PLAZA WAS REPORTED FLOODED AND IMPASSABLE.      |    |                         |
| 0924 AM<br>12/05/2013 | FLASH FLOOD | SAN JUAN<br>SAN JUAN   | PR | 18.41N 66.06W<br>PUBLIC |
|                       |             | FERNANDEZ JUNCOS AVENUE WAS REPORTED FLOODED NEAR PARADA 18TH.           |    |                         |
| 0939 AM<br>12/05/2013 | FLOOD       | SAN JUAN<br>SAN JUAN   | PR | 18.41N 66.06W<br>PUBLIC |
|                       |             | URBAN FLOODING WAS REPORTED IN THE VICINITY OF CLINICA LAS AMERICAS.     |    |                         |
| 0946 AM<br>12/05/2013 | FLASH FLOOD | SAN JUAN<br>SAN JUAN   | PR | 18.41N 66.06W<br>PUBLIC |
|                       |             | PARADA 26TH SECTOR IN SANTURCE WAS REPORTED FLOODED WITH A CAR STRANDED. |    |                         |
| 1025 AM<br>12/05/2013 | FLASH FLOOD | CATANO<br>CATANO   | PR | 18.45N 66.14W<br>PUBLIC |
|                       |             | LAS VEGAS SECTOR IN CATANO WAS REPORTED FLOODED AND IMPASSABLE.          |    |                         |

|  |             |                                  |    |                                  |
|--|-------------|----------------------------------|----|----------------------------------|
| 1037 AM<br>12/05/2013  | FLASH FLOOD | SAN JUAN<br>SAN JUAN             | PR | 18.41N 66.06W<br>PUBLIC          |
| BUENA VISTA SECTOR IN SANTURCE WAS REPORTED FLOODED.   |             |                                  |    |                                  |
| 1200 PM<br>12/05/2013  | FLOOD       | CHARLOTTE AMALIE<br>SAINT THOMAS | VI | 18.34N 64.93W<br>911 CALL CENTER |
| MAFOLIE ROAD WAS REPORTED FLOODED.   |             |                                  |    |                                  |
| 1200 PM<br>12/05/2013  | FLOOD       | CHARLOTTE AMALIE<br>SAINT THOMAS | VI | 18.34N 64.93W<br>911 CALL CENTER |
| VETERANS DRIVE AREA OF GRIFFITH PARK WAS REPORTED FLOODED.   |             |                                  |    |                                  |
| 1200 PM<br>12/05/2013  | FLOOD       | CHARLOTTE AMALIE<br>SAINT THOMAS | VI | 18.34N 64.93W<br>911 CALL CENTER |
| JULIAN JACKSON DRIVE WAS REPORTED FLOODED.   |             |                                  |    |                                  |
| 1200 PM<br>12/05/2013  | FLOOD       | CHARLOTTE AMALIE<br>SAINT THOMAS | VI | 18.34N 64.93W<br>911 CALL CENTER |
| KRONPRINDSENS GADE AREA OF DEPARTMENT OF LABOR WAS REPORTED FLOODED.                                 |             |                                  |    |                                  |
| 1200 PM<br>12/05/2013  | FLOOD       | CHARLOTTE AMALIE<br>SAINT THOMAS | VI | 18.34N 64.93W<br>911 CALL CENTER |
| REAR OF GOTTLIEB GAS STATION WAS REPORTED FLOODED.   |             |                                  |    |                                  |
| 0929 AM<br>12/05/2013  | FLOOD       | SAN JUAN<br>SAN JUAN             | PR | 18.41N 66.06W<br>PUBLIC          |
| ROADS FLOODED IN THE SAGRADO CORAZON TRAIN STATION AREA. ALSO ROAD PR-1 BELOW HIGHWAY 22 IMPASSABLE. |             |                                  |    |                                  |
| 0930 AM<br>12/05/2013  | FLOOD       | CATANO<br>CATANO                 | PR | 18.45N 66.14W<br>PUBLIC          |
| AVENUE FLOR DEL VALLE IN LAS VEGAS FLOODED. ALSO...FLOODING IN THE BARRIO JUANA MATOS.               |             |                                  |    |                                  |
| 0930 AM<br>12/05/2013  | FLOOD       | SAN JUAN<br>SAN JUAN             | PR | 18.41N 66.06W<br>PUBLIC          |
| NEIGHBORHOOD OCEAN PARK...STREET MCLEARY AND VICINITY FLOODED.                                       |             |                                  |    |                                  |
| 1000 AM<br>12/05/2013  | FLOOD       | GUAYNABO<br>GUAYNABO             | PR | 18.39N 66.11W<br>PUBLIC          |
| QUEBRADA ALTAMIRA OUT OF ITS BANKS.  |             |                                  |    |                                  |
| 1027 AM  | FLOOD       | SAN JUAN                         |    | 18.41N 66.06W                    |

|            |             |   |    |                |
|------------|-------------|---|----|----------------|
| 12/05/2013 |             | SAN JUAN  | PR | PUBLIC         |
|            |             | HIGHWAY 26 IMPASSABLE TOWARDS SAN JUAN BEFORE TUNNEL AND AFTER TUNNEL TOWARDS CAROLINA.         |    |                |
| 0258 PM    | HEAVY RAIN  | GUAYNABO  |    | 18.39N 66.11W  |
| 12/05/2013 | U0.00 INCH  | GUAYNABO  | PR | PUBLIC         |
|            |             | LANDSLIDE OF MOGOTE INTO HIGHWAY 22 TOWARDS WEST BEFORE EXIT TO PR 165. ONE LINE BLOOCKED.      |    |                |
| 0430 PM    | FLOOD       | CHRISTIANSTED   |    | 17.75N 64.71W  |
| 12/23/2013 |             | SAINT CROIX   | VI | EMERGENCY MNGR |
|            |             | EMERGENCY MANAGER REPORTED ROADS FLOODED AT CHRISTIANSTED DUE TO GUTS OUT OF ITS BANKS.         |    |                |
| 0500 PM    | FLOOD       | CHRISTIANSTED   |    | 17.75N 64.71W  |
| 12/23/2013 |             | SAINT CROIX   | VI | EMERGENCY MNGR |
|            |             | EMERGENCY MANAGER REPORTED AREAS FLOODED ACROSS PORTIONS OF EASTERN SAINT CROIX.                |    |                |
| 0810 PM    | FLASH FLOOD | FAJARDO   |    | 18.33N 65.66W  |
| 12/24/2013 |             | FAJARDO   | PR | EMERGENCY MNGR |
|            |             | EMERGENCY MANAGER REPORTED PORTIONS OF HIGHWAY 53 CLOSED DUE TO RIVER FAJARDO OUT OF ITS BANKS. |    |                |

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

| Non-Routine Hydrologic Products Issued:         | Approximate number of Products for the month |
|---|--|
| Hydrologic Outlooks (SJUESFSJU)                 | 0  |
| Flood Watches (SJUFFASJU)                       | 0  |
| Flood Warnings (SJUFLWSJU)                      | 0  |
| Flash Flood Warnings (SJUFFWSJU)                | 3  |
| Flash Flood Statements (SJUFFSSJU)              | 4  |
| Urban/Small Stream Flood Advisories (SJUFLSSJU) | 63   |

Here is the [December 2013 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/ahps2/precip.php?wfo=sju>)