



Covered Area Rainfall Event (28/09/2025 to 30/09/2025)

Excess Rainfall

Event Briefing

The Bahamas

08 October 2025

1 INTRODUCTION

This event briefing describes the impact of rainfall on The Bahamas. The Bahamas has four Excess Rainfall policies: The Bahamas - Southeast, The Bahamas - Central, The Bahamas - North and The Bahamas - Extreme North. This rainfall was associated with a Covered Area Rainfall Event (CARE) which started on 28 September and ended on 30 September 2025. The Rainfall Index Loss (RIL) for the Covered Area Rainfall Event was below the attachment point of The Bahamas-Extreme North's Excess Rainfall policy, and therefore no payout is due for this covered area; however, the RIL for the Covered Area Rainfall Event was above the attachment point of the Excess Rainfall policies for The Bahamas – Central and for The Bahamas - North, therefore, two payouts are due under these Excess Rainfall policies to the Government of The Bahamas.

This CARE did not activate the Wet Season Trigger endorsement of the Excess Rainfall policy and therefore no payout under this endorsement is due.

2 EVENT DESCRIPTION

On 27 September at 1500 UTC, the National Hurricane Center (NHC) reported the formation of a tropical depression north of eastern Cuba, with its centre located at latitude 22.0°N and longitude 76.2°W. The system was initially designated as Tropical Depression Nine (TD Nine). Satellite imagery showed a rather disorganized structure, with a small cluster of convective cells situated over the central Bahamas, to the northwest of Acklins Island (Figure 1a). From this point onward, and for the next 24 hours, scattered moderate to locally heavy rainfall affected the central part of The Bahamas, including Long Island, Great Exuma, Cat Island, and Eleuthera (Figure 1a). During this period, TD Nine gradually became better organized, as the convective activity began to align along a developing rainband, while the system moved slowly northwestward, with a forward speed of less than 6 mph (9 km/h).

By 28 September at 1800 UTC, the NHC upgraded TD Nine to a tropical storm, officially naming it Imelda. At that time, the storm's centre was located at latitude 23.9°N and longitude 77.3°W, approximately 13 mi (20 km) east of the southern tip of Andros Island (Figure 2). Satellite imagery revealed that Imelda exhibited an asymmetric structure, with most convective activity concentrated in a rainband extending to the north and east of the centre, while little convection was observed near the inner core (Figure 1b). Although Imelda was still in its early stages, the rainband produced moderate to locally intense rainfall across the central and northwestern Bahamas, notably affecting New Providence, Eleuthera, eastern Andros, and Cat Island.

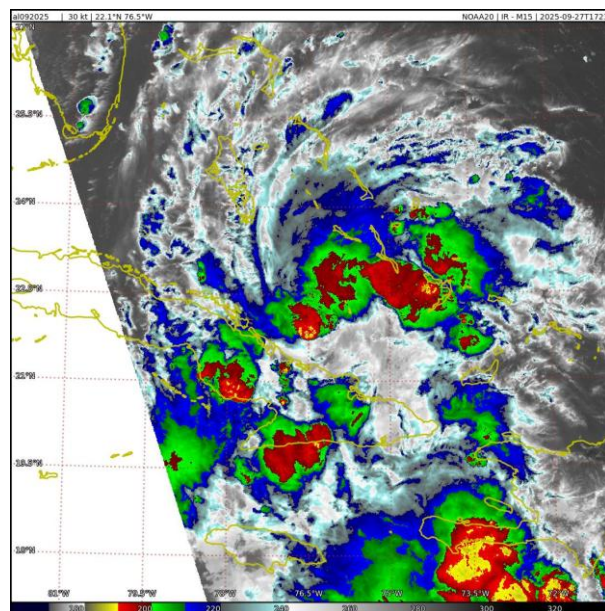
Imelda continued moving slowly northward at about 7 mph (11 km/h), tracking along the western edge of a mid-level high-pressure system. Environmental conditions were marginally favorable for further development: warm sea surface temperatures and a moist atmosphere supported intensification, while moderate vertical wind shear acted as a limiting factor.

Over the following 24 hours, Imelda gradually strengthened. Convective activity began to consolidate closer to the centre, resulting in a more symmetric cloud pattern. Around 0300

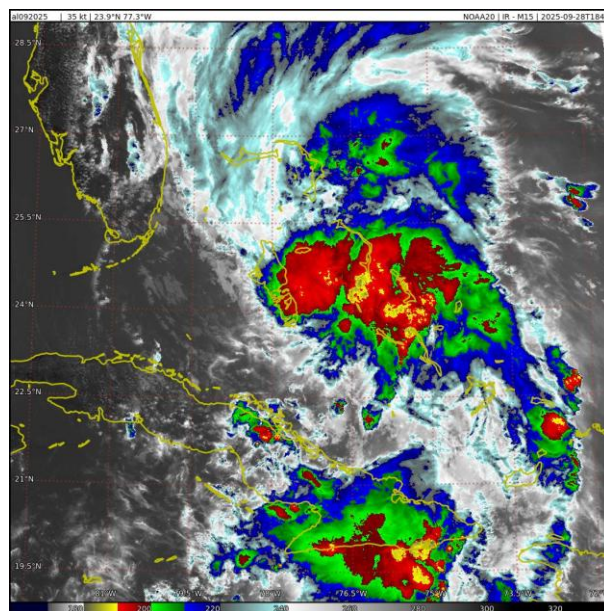
UTC on 29 September, the storm's core passed just east of New Providence (approximately 18 mi or 29 km offshore). At that time, the most intense convection was organized into a rainband wrapping around the storm's northern, eastern, and southern quadrants, bringing moderate to locally heavy rainfall over a wide area between the Abaco Islands and Long Island, as inferable from satellite imagery (Figure 1c).

Later that day, between 1200 and 1500 UTC, Imelda made landfall over the Abaco Islands. By then, the storm displayed a more symmetric structure with enhanced convection wrapping around the western side of the system and signs of a developing inner core (Figure 1d). From this point onward, and over the next 6 to 12 hours, Imelda underwent rapid intensification, aided by a reduction in wind shear. Satellite imagery indicated that the Abaco Islands and the eastern portion of Grand Bahama experienced heavy rainfall during this phase, primarily associated with the storm's inner core (Figure 1d), while Imelda continued to move northward at a steady pace.

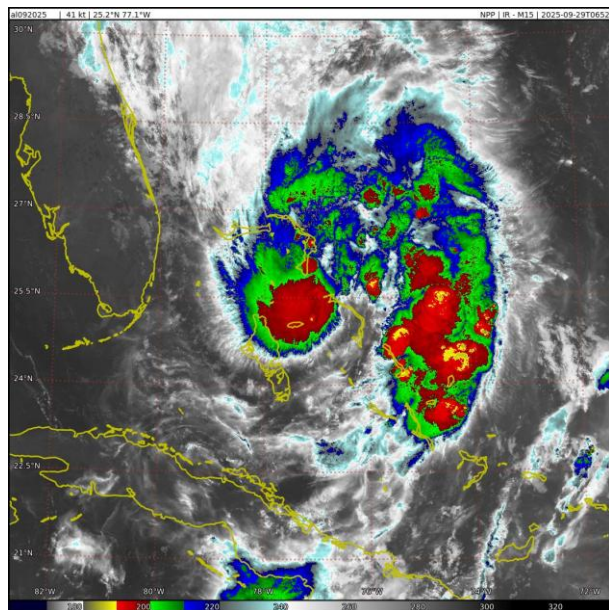
By 30 September at 0000 UTC, the centre of Imelda was located at latitude 28.1°N, longitude 77.3°W—approximately 120 mi (190 km) north of the Abaco Islands. Around this time, the heavy rainfall associated with the system ceased over the northern Bahamas, as the storm moved farther away.



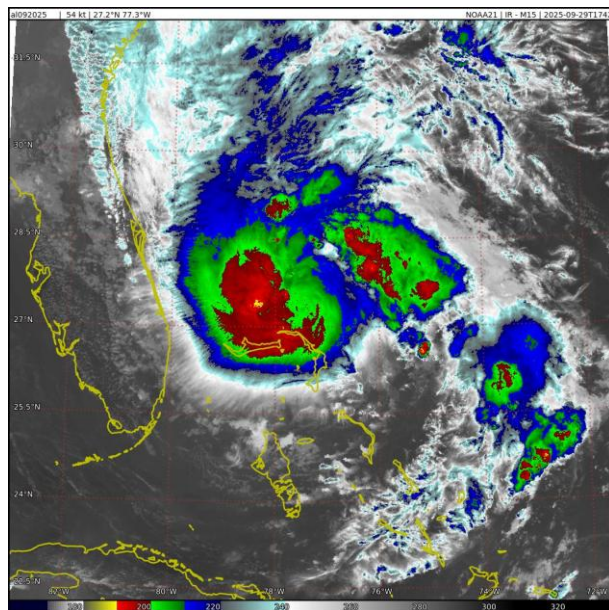
a) 27 September at 1700UTC



b) 28 September at 1800UTC



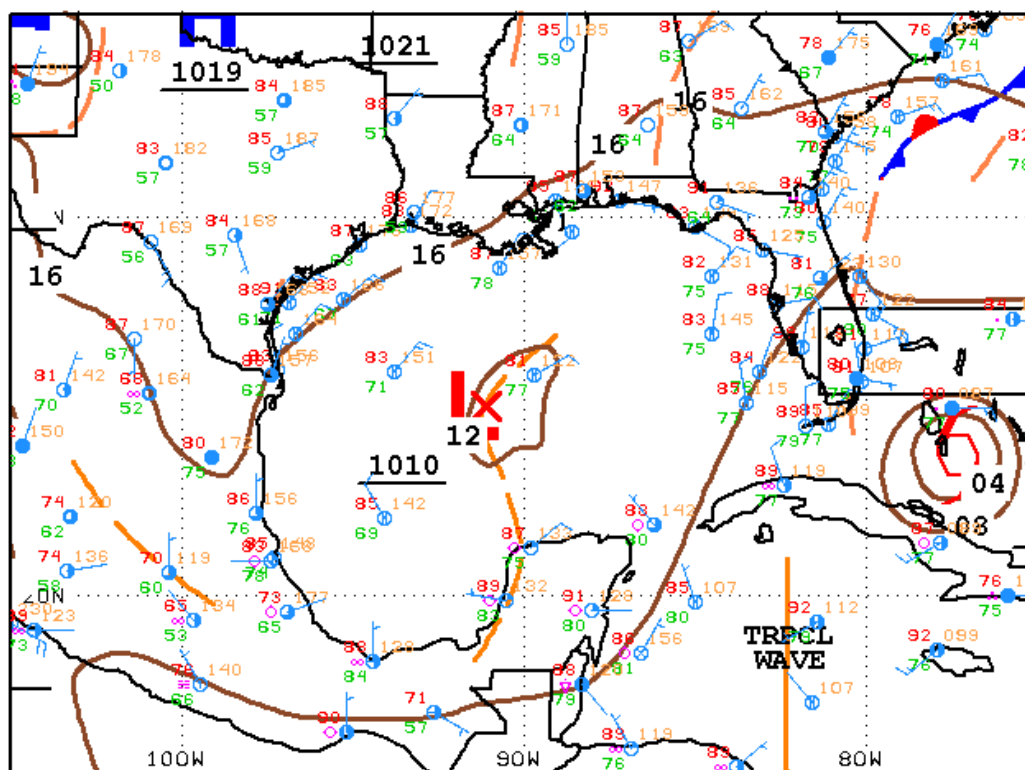
c) 29 September at 0650UTC



d) 29 September at 1800UTC

Figure 1 Satellite imagery on 27, 28 and 29 September, 2025 at different times as indicated by the labels from the thermal infrared channel enhanced with colour. Blue/green colours represent high altitude clouds (top cloud temperature between -50°C and -70°C), while the red/yellow colours represent very high altitude clouds (top cloud lower than -70°C). High altitude clouds indicate strong convection associated with intense precipitation. Source: NOAA, National Environmental Satellite, Data and Information Service¹.

¹ RAMSDIS Online Archive, NOAA Satellite and Information Service, available at: https://rammb-data.cira.colostate.edu/tc_realtime/storm.asp?storm_identifier=a1092025



18Z GULF SURFACE ANALYSIS
ISSUED: Sun Sep 28 20:20:28 UTC 2025
NATIONAL HURRICANE CENTER
MIAMI, FLORIDA
BY TAFB ANALYST: ADAMS
COLLABORATING CENTERS: NHC OPC WPC

Figure 2 Surface analysis over the Gulf of Mexico area on 28 September at 1800UTC. Source: US National Hurricane centre²

3 REPORTED IMPACTS

At the time of writing this report, the information about damage in The Bahamas due to this Covered Area Rainfall Event during the indicated period is described below.

According to local news³, in The Bahamas, power outages were reported in some areas of the northwest, while mandatory evacuation orders were issued for some islands. Authorities also closed most of the schools.

Flights to and from The Bahamas were cancelled, with airports only reopening when weather conditions improved.

On September 28, severe flooding occurred in lower and vulnerable areas of New Providence in

² National Oceanic and Atmospheric Administration - FTP, National Hurricane centre, review date: 28 September 2025, available at: <https://www.nhc.noaa.gov/tafb/GULF18Z.gif>

³ [Tropical Storm Imelda brings chaos to Caribbean – DW – 09/30/2025](#)

the wake of rainfall that drenched the capital⁴.



Figure 3 Flooding in Pinewood Gardens, Nassau Village

4 RAINFALL MODEL OUTPUTS

All data sources used by the XSR 3.1 model, CMORPH, IMERG, WRF5, WRF7, WRF11 and WRF15⁵, detected the occurrence of precipitation over The Bahamas and the surrounding waters during the period 26 to 30 September 2025. Each data source reported a specific distribution and accumulation of rainfall, as discussed below and shown in Figure 3. Three CAREs for The Bahamas were activated on 28 September and lasted on 30 September. The CAREs were activated for The Bahamas - Central, The Bahamas - North and The Bahamas - Extreme North. The CAREs were activated due to the use of the 12-hour and the 48-hour aggregation intervals for precipitation and thus the period considered by the XSR 3.1 model for the loss estimate based on the accumulated precipitation in three areas in The Bahamas was 26 to 30 September 2025.

Table 1: Report from XSR 3.1 Data Sources on the Precipitation over The Bahamas, September 28 to 30, 2025

CMORPH	CMORPH reported total accumulated precipitation values below 200 mm across most of The Bahamas, except for a small area in the Abaco Islands where values ranged between 200 mm and 250 mm.
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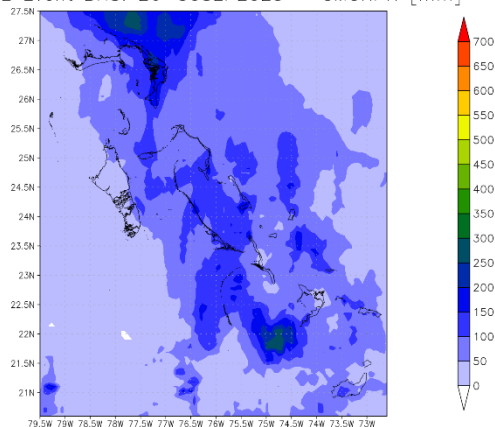
⁴ [Viewing the flooding caused by Tropical Storm Imelda](#)

⁵ CMORPH Model: the satellite-based rainfall precipitation estimates provided by the NOAA Climate Prediction Center (CPC) using the so-called Morphing Technique http://www.cpc.ncep.noaa.gov/products/janowiak/cmorph_description.html. Further details are provided in the Definitions section of this report

IMERG Model: The satellite-based rainfall estimation model developed by NASA, expressed in mm, derived by aggregating the IMERG 30-minute Rainfall Data at 10km spatial resolution and available at <https://jsimpsonhttps.pps.eosdis.nasa.gov/imerg/late>. Further details in the Definitions section of this report WRF5, WRF7, WRF11 and WRF15 Models: the Weather Research and Forecasting Model weather model-based Configuration #1 and #2 data <https://www.mmm.ucar.edu/weather-research-and-forecasting-model>. These data are initialised by the NCEP FNL dataset. (NCEP FNL Operational Model Global Tropospheric Analyses [<http://rda.ucar.edu/datasets/ds083.2/>]). Further details are provided in the Definitions section of this report

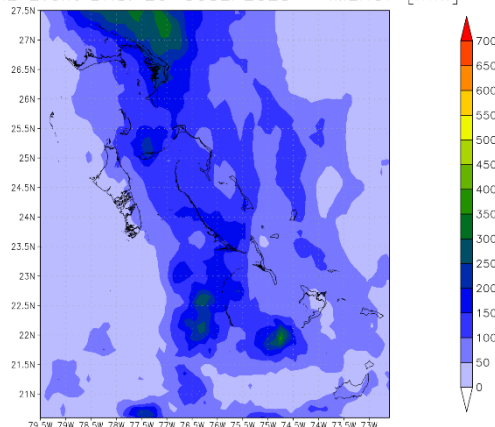
IMERG	IMERG showed an intensity and spatial distribution of total accumulated precipitation values similar to that of CMORPH, but with maximum values, between 200 mm and 250 mm, located over the eastern part of New Providence and the northern portion of the Abaco Islands.
WRF5	WRF5 reported total precipitation accumulations below 200 mm over most of The Bahamas, with peak values between 300 mm and 400 mm concentrated over the Abaco Islands.
WRF7	WRF7 indicated total accumulated precipitation values exceeding 300 mm across much of The Bahamas. The highest values, between 550 mm and 700 mm, were observed in two small areas: one in Great Inagua and the other in Great Exuma.
WRF11	WRF11 showed total accumulated values of precipitation below 200 mm across most of The Bahamas, except for the far northern area—specifically over the Abaco Islands and eastern Grand Bahama—where values ranged between 300 mm and 750 mm. Additional small areas in the central Bahamas recorded values between 250 mm and 350 mm.
WRF15	WRF15 reported accumulated values of precipitation with patterns similar in intensity and distribution to those of WRF11, though with slightly lower maximum values—between 450 mm and 550 mm—over smaller areas in the far northern region, particularly in eastern Grand Bahama and the northwestern portion of the Abaco Islands.

CARE Event BHS: 26–30SEP2025 – CMORPH [mm]



a) CMORPH

CARE Event BHS: 26–30SEP2025 – IMERG7 [mm]



b) IMERG

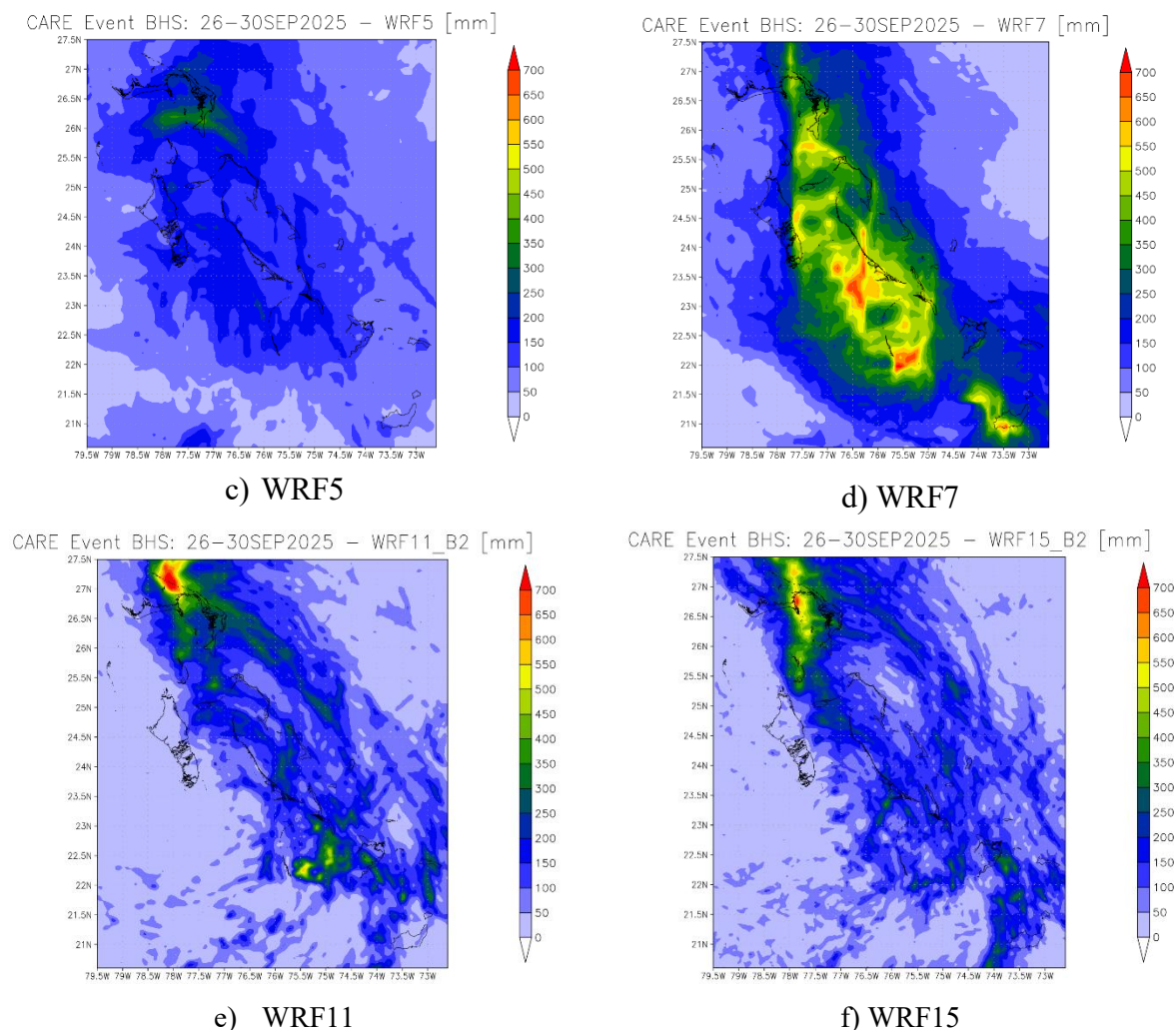


Figure 4 Total accumulated precipitation during the period 26 to 30 September, 2025 estimated by CMORPH (a), IMERG (b), WRF5 (c), WRF7 (d), WRF11 (e), WRF15 (f). Source: CCRIF SPC

Daily rainfall maps by CMORPH, IMERG, WRF5, WRF7, WRF11 and WRF15 over the exposure map of XSR 3.1 are not included here and they can be downloaded for all the three areas at the following links for 12- hour aggregation and 48-hour aggregation respectively:

BHS_C

https://wemap.ccrif.org/OUTPUT/CCRIF/XSR/Events/BHS/BHS_C/CARE_3_2025/daily_prec_short.mp4

https://wemap.ccrif.org/OUTPUT/CCRIF/XSR/Events/BHS/BHS_C/CARE_3_2025/daily_prec_long.mp4

BHS_N

https://wemap.ccrif.org/OUTPUT/CCRIF/XSR/Events/BHS/BHS_N/CARE_2_2025/daily_prec_short.mp4

https://wemap.ccrif.org/OUTPUT/CCRIF/XSR/Events/BHS/BHS_N/CARE_2_2025/daily_prec_long.mp4

BHS_EN

https://wemap.ccrif.org/OUTPUT/CCRIF/XSR/Events/BHS/BHS_EN/CARE_2_2025/daily_prec_short.mp4

https://wemap.ccrif.org/OUTPUT/CCRIF/XSR/Events/BHS/BHS_EN/CARE_2_2025/daily_prec_long.mp4

The Rainfall Index Loss (RIL) was above the loss threshold for The Bahamas - Central for four of the data sources used by XSR3.1: CMORPH, WRF7, WRF11 and WRF15. The RIL was the highest for WRF7.

The Rainfall Index Loss (RIL) was above the loss threshold for The Bahamas - North for all the six data sources used by XSR3.1: CMORPH, IMERG, WRF5, WRF7, WRF11 and WRF15. The RIL was the highest for WRF7.

The Rainfall Index Loss (RIL) was above the loss threshold for The Bahamas - Extreme North for five of the data sources used by XSR3.1: IMERG, WRF5, WRF7, WRF11 and WRF15. The RIL was the highest for WRF7.

In all the three cases, the final RIL (RIL_{FINAL}) was calculated as the average of the RILs above the loss threshold. In the case of The Bahamas - Central, the RIL_{FINAL} was calculated from CMORPH, WRF7, WRF11 and WRF15, for The Bahamas - North, the RIL_{FINAL} was calculated from CMORPH, IMERG, WRF5, WRF7, WRF11 and WRF15 and for The Bahamas - Extreme North, the RIL_{FINAL} was calculated from IMERG, WRF5, WRF7, WRF11 and WRF15.

The RIL_{FINAL} was below the attachment point of the Excess Rainfall policy for The Bahamas - Extreme North, and thus the policy was not triggered for that area. The RIL_{FINAL} was above the attachment point of the Excess Rainfall policies for The Bahamas – Central and for The Bahamas - North, and thus these two policies were triggered. Therefore, two payouts are due under these Excess Rainfall policies for The Bahamas - Central and The Bahamas - North to the Government of The Bahamas.

The Wet Season Trigger (WST) endorsement of the XSR3.1 model did not identify this CARE as a “Wet Season” event⁶ for The Bahamas. Therefore, no payment is due under the Wet Season Trigger endorsement of The Bahamas’ Excess Rainfall policy for the Central and the Extreme North.

The Wet Season Trigger (WST) endorsement of the XSR3.1 model identify this CARE as a “Wet Season” event for The Bahamas North Excess Rainfall policy, however no payout under the Wet Season Trigger will be made if, during the same Wet Event, there has already been a payout under the standard procedure of the underlying policy.

⁶ The WST endorsement is designed to provide a predetermined payout for rainfall events occurring amidst already saturated soil conditions, effectively capturing the heightened risk of flooding and landslides. It is activated based on two factors: the Wet Index (the average 1-month Standardized Precipitation Index for all grid cells in the country) and Wet Periods (the period of time where the Wet Index exceeds 1, which indicates that the soil is wetter than its long-term average and serves as an indicator of soil saturation). The WST policy endorsement provides a payment when one or more CAREs with a modelled loss greater than zero and lower than the policy Attachment Point occur within a Wet Period and the corresponding value of the Wet Index during the Wet Period exceeds a predetermined threshold. Wet season event (WE). Any period of consecutive days, during which the Wet Index (WI) is equal or greater than 1.

5 TRIGGER POTENTIAL

The Rainfall Index Loss calculated for the Covered Area Rainfall Event (CARE) for The Bahamas – Extreme North was below the attachment point of the Excess Rainfall policy for this area, and therefore no payout is due.

The Rainfall Index Loss calculated for the Covered Area Rainfall Event (CARE) for The Bahamas – Central and The Bahamas – North was above the attachment point of the Excess Rainfall policy for these areas, and therefore two payouts are due.

This CARE did not activate the Wet Season Trigger endorsement of the Excess Rainfall policy and therefore no payout under either this endorsement is due

For additional information, please contact CCRIF SPC at: pr@ccrif.org

DEFINITIONS

<i>Active Exposure Cell Percentage Threshold</i>	The percentage of the total number of XSR Exposure Grid Cells within the Covered Area of the Insured, that must be exceeded to trigger a Covered Area Rainfall Event.
<i>Active Exposure Grid Cells</i>	The XSR Exposure Grid Cells for which in the same single day the Aggregate Rainfall #1 value computed using the CMORPH-based Rainfall Estimate equals or exceeds the Rainfall Event Threshold #1 or the Aggregate Rainfall #2 value computed using the CMORPH-based Rainfall Estimate equals or exceeds the Rainfall Event Threshold #2.
<i>Aggregate Rainfall #1</i>	The rainfall amount accumulated over the Rainfall Aggregation Period #1 (as defined in the Schedule) measured in millimeters (mm) in any of the XSR Exposure Grid Cells in the Covered Area of the Insured. For a given day and a Rainfall Aggregation Period #1 of n hours, the Aggregate Rainfall #1 is the maximum amount of rainfall accumulated over any of the n-hour windows that intersect the day itself considering a time interval of 3 hours.
<i>Aggregate Rainfall #2</i>	The rainfall amount accumulated over the Rainfall Aggregation Period #2 (as defined in the Schedule) measured in millimeters (mm) in any of the XSR Exposure Grid Cells in the Covered Area of the Insured. For a given day and a Rainfall Aggregation Period #2 of n hours, the Aggregate Rainfall #2 is the maximum amount of rainfall accumulated over any of the n-hour windows that intersect the day itself considering a time interval of 3 hours.
<i>Calculation Agent</i>	Entity charged with undertaking the primary calculation of the Rainfall Index Loss.
<i>CMORPH-based Maximum Aggregate Rainfall #1</i>	The maximum value during the Covered Area Rainfall Event of the Aggregate Rainfall #1 computed using the CMORPH-based Rainfall Estimates in any given XSR Exposure Grid Cell over the Covered Area of the Insured.
<i>CMORPH-based Maximum Aggregate Rainfall #2</i>	The maximum value during the Covered Area Rainfall Event of the Aggregate Rainfall #2 computed using the CMORPH-based Rainfall Estimates in any given XSR Exposure Grid Cell over the Covered Area of the Insured.
<i>CMORPH-based Covered Area Rainfall Parameters</i>	The CMORPH Model information provided on a continuous basis by the XSR Model Data Reporting Agency used by the

	Calculation Agent to obtain the CMORPH-based Rainfall Estimates using the XSR Rainfall Model. Parameters are drawn from XSR Exposure Grid Cells within the Covered Area of the Insured, by their respective latitude and longitude. Measurement units and precision of data ingested by the XSR Rainfall Model are identical to those provided by the XSR Model Data Reporting Agency and are further elaborated in the Attachment entitled ‘Calculation of Rainfall Index Loss and Policy Payment’.
<i>CMORPH Model</i>	The satellite-based rainfall estimation model provided by NOAA CPC as described in the Rainfall Estimation Models section of the Policy.
<i>Covered Area</i>	The territory of the Insured as represented in the XSR Rainfall Model.
<i>Covered Area Rainfall Event</i>	Any period of days, with an interruption less than or equals to the Event Tolerance Period, during which the number of Active Exposure Grid Cells is greater than or equal to the product of (a) Active Exposure Cell Percentage Threshold multiplied by (b) the total number of XSR Exposure Grid Cells within the Covered Area.
<i>Country Disaster Alert</i>	An official disaster alert issued by ReliefWeb (http://reliefweb.int/) for the country in question for one of the following types of events: tropical cyclone, flood, flash flood and severe local storm. Any disaster alert issued later than seven (7) days after the completion of the Covered Area Rainfall Event (CARE) event will not be considered. The Disaster Alert description issued by ReliefWeb and/or its attached documentation must include specific reference to the CARE dates with a tolerance period of 2 calendar days.
<i>Maximum Aggregate Rainfall #1</i>	The highest value during a Covered Area Rainfall Event of the Aggregate Rainfall #1 amount in any of the XSR Exposure Grid Cells in the Covered Area of the Insured computed.
<i>Maximum Aggregate Rainfall #2</i>	The highest value during a Covered Area Rainfall Event of the Aggregate Rainfall #2 amount in any of the XSR Exposure Grid Cells in the Covered Area of the Insured computed.
<i>Rainfall Event Threshold #1</i>	Aggregate Rainfall #1 level as defined in the Schedule which should be exceeded to trigger an Active Exposure Cell.

<i>Rainfall Event Threshold #2</i>	Aggregate Rainfall #2 level as defined in the Schedule which should be exceeded to trigger an Active Exposure Cell.
<i>Rainfall Aggregation Period #1</i>	The number of hours over which the Aggregate Rainfall #1 is computed for all XSR Exposure Grid Cells during a Covered Area Rainfall Event.
<i>Rainfall Aggregation Period #2</i>	The number of hours over which the Aggregate Rainfall #2 is computed for all XSR Exposure Grid Cells during a Covered Area Rainfall Event.
<i>Rainfall Index Loss</i>	For any Covered Area Rainfall Event affecting the Insured, the US Dollar loss calculated by the Calculation Agent using the XSR Rainfall Model, as described in the Attachment entitled ‘Calculation of Rainfall Index Loss and Policy Payment’. The Rainfall Index Loss can only be calculated once the Covered Area Rainfall Event is completed.
<i>WRF5 Model</i>	The weather research and forecasting rainfall model by NOAA with Configuration #5 data initialized with and assimilating the data provided by the National Center for Environmental Prediction as described in the Rainfall Estimation Models and in the Input Data to the Rainfall Estimation Models sections of this Attachment.
<i>WRF7 Model</i>	The weather research and forecasting rainfall model by NOAA with Configuration #7 data initialized with and assimilating the data provided by the National Center for Environmental Prediction as described in the Rainfall Estimation Models and in the Input Data to the Rainfall Estimation Models sections of this Attachment.
<i>XSR Rainfall Model</i>	The computer model used to calculate the Rainfall Index Loss, as described in the Attachment entitled ‘Calculation of Rainfall Index Loss and Policy Payment’.
<i>XSR Exposure Grid Cells</i>	The 30 arc-second by 30 arc-second grid of cells each of which is attributed with an XSR Grid Cell Exposure Value greater than zero.
<i>XSR Grid Cell Exposure Value</i>	The value, used to calculate the CMORPH-based Exposure Grid Cell Loss, the WRF5-based Exposure Grid Cell Loss, and the WRF7-based Exposure Grid Cell Loss.